POPULATION TODAY

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FROM THE EDITOR'S DESK

The census of 1930. Poring through the shelves of a second-hand bookstore in York, Pennsylvania, I recently came across a venerable paperback with a most arresting title: *God and the Census*, by the Rev. Robert N. McLean, dated 1931. McLean praised the just-released census of 1930:

"A census is...far more than a mere counting of noses. While it charts the population increase of towns and cities, it also indicates the development of national and per capita wealth; measures the growth of industry; reveals the rise and fall in land values; shows the sorts of houses in which people live in both city and country districts; traces the movement of people from town to city; pictures the advances in public education. For the next ten years the material gathered in the census of 1930 will serve as the source for every serious study about the people of the United States.... The census is our barometer of national progress."

A Presbyterian churchman, McLean worked with "home missionary programs"—outreach to immigrants and workers in New York City. He must have been acutely aware of the acrimonious fallout from the census a decade earlier. The 1920 Census revealed a shift of population to the country's burgeoning, heavily immigrant urban areas. Congressional incumbents, who feared the impending power shift, restricted immigration and—for the only time in U.S. history—refused to carry out Constitutionally mandated reapportionment.

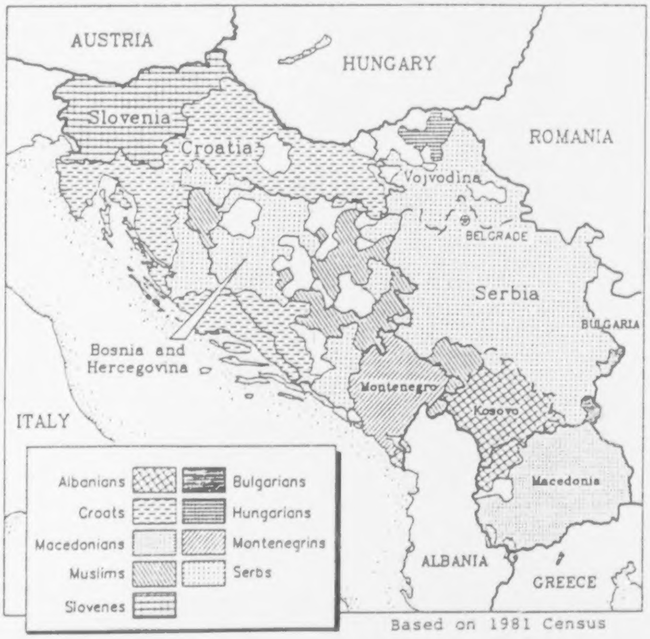
As a footnote, McLean did perceive some limitations to objective census data: "In our technique of the census we have worked out a method of estimating all values except spiritual values. We have learned how to gauge all signs of progress except moral progress. We have learned how to count everybody but God."

—Susan Kalish

SPEAKING GRAPHICALLY

Yugoslavia: Ethnic Majorities by Area

Department of State



Based on 1981 Census

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Editor: Susan Kalish
Demographic Editor: Carl Haub
Book Review Editor: Nazy Roudi
Contributing Editors: Tom Godfrey; Taynia Mann
Consulting Editors: Thomas W. Merrick; Winthrop P. Carty; Sharon Hershey; Alex de Sherbinin; Machiko Yanagishita
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728
(202) 483-1100

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Recycled Paper

Nationalities of the USSR: Nations in Embryo?

Russian Information Agency-Novosti

Through the generations, the Azerbaydzhanis have retained their own ethnic identity.

For decades now, Americans have been accustomed to using the terms "the Soviet Union," "the USSR" and "Russia" almost interchangeably. Most of us never noticed that only about half the people in the USSR are, in fact, ethnically Russian—that is, they speak Russian or have family roots in Russia.

The other half of the population is a patchwork quilt of diverse groups. Groups range from the European, largely Christian Estonians, with women averaging just over two children in their lifetimes, to the central Asian, Islamic Uzbecks, with women averaging more than five children in their lifetimes. Although substantial numbers of Russians have settled in every corner of the USSR, different nationalities form the majority in all 11 of the national republics (in addition to Russia itself) that now constitute the USSR. (See Take a Number, page 10.)

As we go to press, three former USSR republics—Latvia, Lithuania, and Estonia—have gained independence. The Baltic states now have seats in the United Nations. The Ukrainians have declared their independence, the Armenians have voted theirs, and independence movements exist in several other republics of the USSR. Exactly which and how many nations will eventually emerge from the pre-existing nationalities in the USSR is anyone's guess. That some so-dubbed "independence" movements seem to be pursuing something less than full separation from the center further complicates the matter.

The accompanying table shows the numbers of the major nationalities in the USSR as of the 1989 census. Out of a total population of 285 million, 145 million are ethnic Russians, 44 million are Ukranian, and 10 million Belorussian, making these Slavic nationalities combined the dominent population group with 199 million. Uzbek, with a population of almost 17 million, is the third largest nationality.

—S.K.

Table 1. Ethnic Composition of the Soviet Population, 1989

	Millions of people
Total population	285.7
Russians	145.1
Ukranians	44.2
Uzbeks	16.7
Belorussians	10.0
Kazaks	8.1
Azerbaydzhanis	6.8
Tatars	6.7
Armenians	4.6
Tadzhiks	4.2
Georgians	4.0
Moldavians	3.4
Lithuanians	3.1
Turkmen	2.7
Kirgiz	2.5
Germans	2.0
Chuvash	1.8
Latvians	1.5
Bashkirs	1.5
Jews	1.4
Mordvinians	1.2
Poles	1.1
Estonians	1.0
Others	12.1

Source: Goskomstat SSSR, Natsional'nyy sostav naseleniya SSSR, Moscow: Finansy i statistika, 1991 (from U.S. Census Bureau Archives).

Iran: Rapid Growth Prompts 5-year Census

Iran's population is growing so fast that the country carried out a special census in September and early October—just five years after its regular decennial census in 1986. Extremely rapid growth and a youthful population have made the 1986 data grossly out of date, according to Mr. Jamshidi, head of Iran's statistics center, according to the Iran Times.

In an unprecedented measure to bring the population crisis message home, census takers distributed birth control devices to families they interviewed. The Iranian government also recently announced that it will deny ration coupons for the fourth child born to any family after next July.

If current estimates of Iran's population are confirmed by the census to be 59.5 million (up 10 million in five years), the country's growth rate is now a soaring 3.6 percent. The population of the Tehran area numbers about 13 million.

Another reason for the special count is that the 1986 census missed many parts of the country because of the war with Iraq.

After the revolution in 1979, the government initially welcomed population increase, but economic and crowding problems caused a dramatic turnabout. [See *PT*, March 1991.] In 1989, Iran adopted a birth control policy that called for reducing average family size to four children, providing family planning services to one-fourth of Iranian women by 1993, and slowing the growth rate to 2.3 percent by 2011. Before his death, the Ayatollah Khomeini endorsed family planning—while continuing to condemn abortion. The Iran government subsidizes condoms and female sterilization.

Iran's current leader, Seyed Ali Khamenei, publicly filled out the census form, urging the public to cooperate. Like many Iranians of his generation, Khamenei has six children.

[Source: *Iran Times*, 9/20/91]

Mexican and Cuban Americans Hold Mainstream Views

In characterizing the political leanings of U.S. Hispanics, the conventional wisdom has been that, on a scale from most liberal to most conservative, we could line up Hispanics by nationality group in this order: Puerto Ricans, Mexican Americans, non-Hispanic whites, and Cuban Americans.

Recent research argues against some of these characterizations. Once sociodemographic factors were controlled for, Mexicans and Cubans were statistically indistinguishable from non-Hispanic whites. Puerto Ricans, however, remain the most liberal group.

This is one surprising finding of the National Latino Political Survey—the first-ever, large-scale survey to report on the political attitudes of Hispanic groups by national origin. It included 1,546 Mexican-American, 589 Puerto-Rican, and 598 Cuban-American households. Hispanics of Mexican, Puerto Rican, and Cuban origin make up about three-fourths of all Hispanics in the United States. Participants were queried on the appropriate level of government spending on social welfare, racial quotas, gender equality, and other current issues.

Another survey finding was that few (16 percent) respondents preferred to identify themselves through pan-ethnic terms such as Latino or Hispanic. Rather, 83 percent preferred to be identified by country of origin, for example Mexican American or Puerto Rican.

The survey, reported at the American Political Science Association's annual meeting in Washington, D.C. in August, was funded by the Ford, Spencer, Tinker, and Rockefeller Foundations. Its co-principal investigators were Angelo Falcón, president of the Puerto Rican Institute in New York City, Dr. John García, the University of Arizona; Rudolfo de la Garza of the Kennedy School of Government at Harvard University, and Dr. Chris García from the University of New Mexico.

—*Taynia Mann and Susan Kalish*

Fertility Plunges in Eastern Germany

The recent political upheavals in Europe have had some demographic effects. According to *The Week in Germany,* it was reported at a meeting of the Institute for Educational Development in Dortmund that births in eastern Germany have dropped by *half* in 1991.

Whether the drop off is due to political disruption, migration, or economic uncertainty is not known, but it is a truly dramatic decline. The number of births in the five new German states is only expected to total about 114,000 in 1991, compared to the approximately 225,000 annual births in prior years. The birth rate had dropped somewhat by 1989, so that the former East Germany recorded a natural decrease in that year, but nothing like the decline seen today.

Elsewhere, Romania has also reported a sharp decrease in births, from 16 births per 1,000 people in 1989 to 13.6 in 1990. While not as dramatic as in eastern Germany, the drop in this formerly pronatalist country is notable. In December 1989, family planning measures and abortion once again became legal in Romania, possibly accounting for the falloff.

Meanwhile, Spain may be in the process of setting an all-time low record for country fertility. Spain's reported crude birth rate in 1990 was 10.2 births per 1,000 people. Given the age structure of Spain's population, this birth rate suggests that Spain may soon score an even lower total fertility rate (average lifetime births per woman) than western Germany's record of 1.28, set in 1985. Since only provisional data are available, we can't call this one yet.

—*Carl Haub*

Martha Herr

Young woman in eastern Germany: Too busy for babies?

Funding Cuts for Census Products Partly Restored

As part of the massive appropriations bill passed October 3, the U.S. Congress restored $20 million of the $30 million in funding cuts proposed by the Senate for the Census Bureau. The cuts, which the Senate Appropriations Committee wrote into the Senate version of the bill this summer, would have drastically reduced funding for publishing the results of the 1990 census. Census data products vary from print volumes for the country and each state, to maps (both paper and computerized), microfiche, and data in computer-readable form.

The cuts had caused considerable consternation among users of census data. According to congressional staff, the many protests received from individual data users were influential in restoring funding. At the current funding level, however, it seems likely that some planned data products may be delayed or have to be abandoned.

Desktop Data Processing: A Report from the Frontier

Aichin Jones

Tom Godfrey: Making a PC do the job of a mainframe.

Desktop computing applications continue to expand rapidly and are becoming a cost effective alternative to large multi-user mainframe systems. But, for the most part, demographers have not found it feasible to shift their number crunching to the personal computer because of the sheer size of the data files they commonly use. Today, desktop processing of large files that reside on standard computer tapes (2400 foot 9-track tapes) is not only possible but can be cost effective and even result in a net savings of time.

For the past six months, Decision Demographics, the consulting arm of the Population Reference Bureau, has ventured into this computing frontier. The report from the frontier is to expect some surprises—some good and a few bad. While obviously a fast personal computer is still no match for a dedicated mainframe, we have found it a time-saving alternative to using a remote mainframe system. Being your own system manager and operator means your name is always at the head of the tape queue and large jobs can be run at will. This advantage, plus having a dedicated processor, can produce a net faster job turnaround. On the other hand, being a system manager means, among other things, fixing things that don't work, optimizing the system configuration, cleaning tape heads, and keeping the tape library organized.

How We Use It

Decision Demographics' tape drive is a self-loading M4 Data LTD model 9914 Streamer. We simply set the tape in and shut the door. It has one of the higher data transfer rates of PC tape drives, being capable of transferring the complete 196Mb of the March 1990 Current Population Survey (CPS) onto the hard disk in less than 15 minutes.

This data transfer is done using CHI software—an easy-to-use software package that communicates with the tape drive. It oversees both tape file reading and writing, as well as system backups. It can read both EBCDIC and ASCII data files on both labeled and unlabeled tapes. A most useful feature is the ability to interactively browse through a tape, viewing records on the screen. CHIDCU, another easy-to-use software program from CHI, permits the selection of fields or records from the source tape data file. Unfortunately our mainstay analysis program, SAS-PC, is incapable of reading or writing directly from/to tape so CHI and CHI-DCU are necessary links to the tape drive. Consequently, files are limited by the 320Mb disk drive—a manageable limit for almost all of our applications.

The Good, the Bad, and the Ugly

Reading raw data with SAS-PC with the MS-DOS operating system is one of the slower operations on the PC. Making a SAS system data file from the March 1990 CPS takes about 20 minutes on our 33 MHz "386" PC with a math-coprocessor, 8Mb RAM and a hard disk with a 15 milliseconds average access time. But once the system file is created, analysis proceeds quite quickly. It only takes a few minutes to run a typical set of cross-tabs of all 200,000 persons in the CPS or to accomplish further data manipulation. Even with a file of 30,000 cases, running logistic regression models took less than one minute.

After returning one lemon to the manufacturer, the performance of the tape drive has been flawless. The SAS-PC has given the biggest problems. Reading raw data has been the most problematic area with the SAS-PC program frequently getting "hung" in the process. Program syntax errors do not always produce error messages, which can be particularly frustrating to the programmer. While the SAS Institute consultants have been helpful with some problems, as soon as they learn the size of the data files being used their reaction has often been "that's an awfully large file to be using with SAS-PC under the MS-DOS operating system." Through testing, however, we have shown that many of our problems do not seem inherent to large file size.

Overall, a 9-track tape drive works well with a PC and PC-SAS has been satisfactorily fast. However, the unreliability of SAS has been troubling. Users planning to process large files with SAS-PC should consider using the SAS-PC version for the OS/2 operating system (advice the SAS Institute has given us all along). This operating system is much better configured for processing large data files and consequently SAS is rumored to be at least 50 percent faster than in an MS-DOS environment and less prone to "bugs."

Our experiences in the frontiers of desktop number crunching suggest that, although you don't have to be a computer science specialist to set up and run large PC applications successfully, it is not an endeavor for everyone. Nonetheless, this area is promising territory for the more technically inclined researcher.

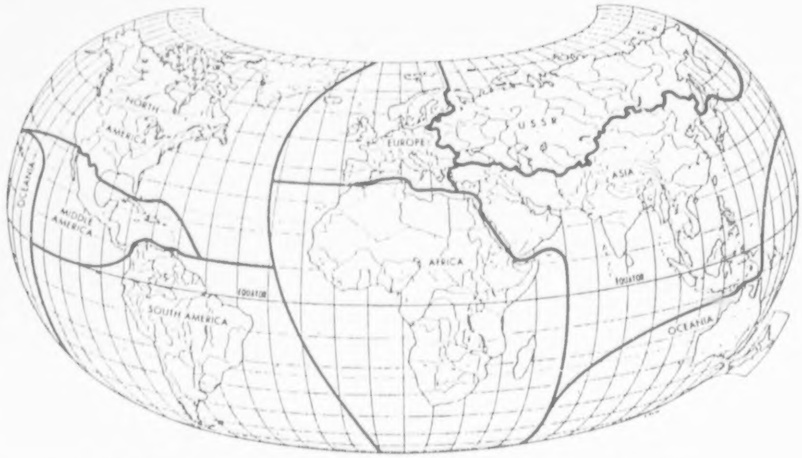
—Tom Godfrey

Tom Godfrey is Vice President for Research with Decision Demographics.

DEMOGRAPHER'S PAGE

The USSR and the Changing Geography of Population

by Carl Haub



Demarcating the world's continents: Once it all seemed so straightforward.
(From *World Population and Production*, W.S. and E.S. Woytinsky, 1953.)

Geography is rarely the stuff of headlines, but recent political events may change all that. 1990 saw the reunification of the Germanies and the Yemens. This year, the rapid breakup of the post-coup Soviet Union and a civil war that threatens to break apart Yugoslavia continue to stir the geographic cauldron.

These more recent events, all would agree, are likely to increase the roster of the world's nations, adding new players to the international stage. Press reports tell us that the three independent Baltic states of Estonia, Latvia, and Lithuania have increased the roster of the world's countries by three. But to what list do we add them? As it turns out, there is no such thing as a definitive inventory of the world's countries or even any accepted criteria that tell us in what region they belong.[1](See box.) The UN *Demographic Yearbook* lists data for "countries or areas," carefully pointing out that that means "countries, territories, cities, or areas."

Exploring some of the difficulties in assigning populations to region and country status, we should recognize that the Earth's land mass is not likely to subdivide itself into neat areas that will avoid arbitrariness in classifications. And, this is hardly the first period in which many country boundaries have changed. Pity the poor geographer/demographer trying to keep up with changes in nineteenth century Europe!

The unification of the two Yemens caused few geographic problems since both North and South Yemen lie in Western Asia. German reunification, however, decreased the population of Eastern Europe by about 16 million. This occurred when the former German Democratic Republic was added to Western Europe.

But the breakup of the Soviet Union is a different matter altogether. This will cause all sorts of difficulties for those who list countries, including the authors of PRB's own *World Population Data Sheet*. But, while that is true enough, it does not mean that the situation was entirely copacetic before. To consider the impact of the Soviet developments, we need to review how countries or areas are presently classified.

Tidying Continental Lists

In the *World Population Data Sheet*, the United Nations' method of classifying territory, and therefore population, is followed almost exactly.[2] This is done because the UN system (as defined by its statistical office) is widely used in the literature on population and development. For the most part, UN classifications are noncontroversial. Africa includes 48 countries on the mainland and a few nearby islands nations.

Latin America includes all countries south of the Rio Grande—a somewhat controversial proposition. Mexico is included in Central America which is itself put into Latin (rather than North) America where North American geographers usually place them.[3] This approach has the effect of placing Central America into the same cultural and linguistic groups as the rest of Latin America *and* keeps it neatly in the less developed category.[4] As a result, the North American population comprises the United States (including Alaska and, yes, even Hawaii), Canada, Bermuda, Greenland, and St. Pierre and Miquelon.

South America (with the "tropical/temperate" distinction now dropped) plus the Caribbean make up the balance of Latin America. The inclusion of the Caribbean has a certain geographic logic, except for distinctly non-Spanish-speaking countries such as Jamaica, Trinidad and Tobago, and Guyana. Even the adjective "Latin" can mean different things to different people. Often used as a synonym for "Spanish-speaking," it can easily cover other languages such as French and even Romanian.

The population of Asia lives in a wide sweep of countries from Japan and the Philippines on the East, down to Indonesia, then westward across the Indian subcontinent to the Arabian Peninsula, terminating in Turkey (a small piece of which is physically in Europe). This is quite a scope. Oceania comprises Australia, New Zealand, the small Pacific islands, and Papua, New Guinea (which

Carl Haub is a demographer and Director of Information and Education at the Population Reference Bureau

shares the island of New Guinea with Indonesia, although the latter is actually counted as being in Asia).

Europe, Asia, and the USSR

Then we have Europe and the USSR. The USSR, of course, spans two continents, both physically and culturally. The traditional dividing lines between Europe and Asia, the Ural and Caucasus mountain ranges, lie within the USSR. So list-makers have chosen to treat the USSR as an entity unto itself—a type of mega-region—neatly finessing the Europe/Asia classification problem. Declarations of independence by some of its former constituent republics seem likely to interfere with this solution sooner or later.

About one-fourth of the USSR's population is in Asia. The first republics to separate, the Baltics, are clearly European, but what section of Europe? For now, it seems to make sense to include them in Northern Europe, based upon latitude and their location on the eastern coast of the Baltic near Finland. (As a footnote, the secession of Lithuania cuts off the Kaliningrad oblast from the Russian Republic; this zone, formerly Konigsberg, contains an important Soviet seaport.)

If other republics break from the USSR, their populations, too, will have to be assigned to a continent. Some are clearly European, such as the Ukraine and Moldavia and some Asian, such as Turkmenistan and Kirghizia. There is some disagreement, however, in the Caucasus region. The National Geographic *Atlas of the World* clearly shows Georgia, Armenia, and Azerbaydzhan as Asian. Other maps, however, such as Hammond's, draw the European line further south, at the USSR and Iranian/Turkish border.

Keeping Up with the Headlines

The situation in the USSR (and in Yugoslavia, as well) continues to raise questions. As subnational areas and republics declare independence, when do they achieve separate country status? Can a republic yield some areas of sovereignty, such as foreign relations or an army, to a central government and still be independent? Can they change their minds without agreement from the other republics? For inclusion in the *World Population Data Sheet*, a seat in the UN General Assembly is a significant milestone. In the USSR, this criterion is complicated by the fact that the Ukraine and Belorussia already *have* seats—a holdover from a compromise on the Soviet Union's representation when the UN was first founded.

Further change is clearly in the wind. We should all stay tuned. For now, let's remember that the population of "Europe" actually omits some 200 million Europeans who live in the USSR.

Once (and if) the political changes in Europe sort themselves out, we must then turn a careful geographic eye to Oceania. Micronesia and the Marshall Islands just joined the UN!

What is a Country?

Before counting countries or worrying about where to put them, we first must decide just what a country is. This number becomes significant, after all, when we wish to make statements such as "such-and-such percent of the world's countries import half their food needs." To calculate that, we clearly need to know exactly how many countries exist.

Deciding what to include on an official list of countries is not as straightforward a job as it may seem. For example, France certainly is a country, a fully sovereign state, but what constitutes "France?" France consists of 96 *departments,* including those on the island of Corsica. It excludes the overseas departments of Guadeloupe, Martinique, French Guyana, Reunion, and other territories, which are thereby treated as separate countries.

Webster's defines *country* as follows: "a political state or nation: the territory of a usually independent nation that is distinct as to name and the characteristics...of its people." Yet, on closer examination, independence (like sovereignty) turns out to be a continuum rather than an absolute, and commonwealths are often listed as countries.

For example, the Canary Islands are as much a part of Spain as Hawaii is of the United States. Puerto Rico, however, is a U.S. commonwealth or, in Spanish, "Estado libre asociado" or *free associated state.* The Comoros Islands, in the Indian Ocean, declared themselves independent from France in the 1970s, but the island of Mayotte elected to stay with France and is today a French territory. This split created a new country. Country lists may also include areas in dispute, such as Western Sahara, which is claimed by both Mauritania and Morocco.

Notes

1. About 10 years ago, we discussed the subject of just how to count the world's countries. (*Intercom,* 9/80, "How Many Countries Are There Really?"). At that time, the count was 215. We will defer a recount until more is known about events in Europe, particularly Yugoslavia and the USSR.
2. The *World Data Sheet* includes a separate listing for Taiwan, which is not recognized by the UN, includes East Timor as a part of Indonesia, and shows the West Bank area separately.
3. See, for example, *Webster's New Geographical Dictionary* (which uses Hammond maps) and the National Geographic *Atlas of the World,* 6th edition.
4. The categories *developed* and *developing* follow the original delineation outlined in the UN's *World Population Prospects as Assessed in 1963.* That division was based on fertility levels. Regions with a TFR (total fertility rate, or average lifetime births per woman) of 4.1 and higher (that is, a gross reproduction rate of 2.0) were classified as developing. If the exact same criteria were applied today, many countries would move out of the developing category.

Population Scholars Tell All to PAA Historian

After nearly 20 years of fits and starts, the Population Association of America (PAA) has finally completed its Oral History Project. Entitled *Demographic Destinies*, the two-volume study contains extensive interviews with 36 of PAA's 53 past presidents and 14 of its 19 secretary-treasurers.

The project was the brainchild of Anders Lunde, secretary-treasurer of PAA from 1965 to 1968. Lunde, with the help of two colleagues, taped more than a dozen interviews between 1973 and 1979. In 1982, Lunde passed the torch to Jean van der Tak, then editor of the Population Reference Bureau's *Population Bulletin*, who delayed pursuing the project until her retirement in 1987. The choice of van der Tak, a woman of almost frightening energy and persistence, was a most felicitous one.

Van der Tak read voluminous background material, contacted one and all, and set forth to interview her subjects—mostly in their homes or offices. The result was 41 interviews, two of which were "self-interviews" based on a questionnaire. Interviewees were allowed to edit the final product.

The work was a labor of love. Van der Tak gave her time to the project and paid for much of the travel out of her own pocket.

Demographic Destinies sheds light on the development of the 60-year-old PAA and the evolution of demographic thinking. But the volumes are most revealing about the subjects themselves. Despite the opportunity to edit out any indiscreet or controversial observations, the demographers were surprisingly frank. Often professional rivalries are vividly apparent in the interviews. Van der Tak's knowledge of her subjects and her uncompromising questioning help bring out the human side of the intellectual ferment and personal competition that shaped American demographic thinking.

Conrad Taeuber, Irene Taeuber, Philip Hauser, Dudley Kirk, Judith Blake, Donald Bogue, Kingsley Davis, Ansley Coale and the rest come through as interesting human beings as well as commanding intellectuals.

Early PAA meetings were composed of pioneers who knew each other well. "It was a friendly association," recalls Frank Notestein. Eleanor Roosevelt brought her knitting to one session, and Gunnar Myrdal, the famed Swedish sociologist, delighted in the meetings. The first PAA meeting brought together only about 35 people and the old-timers lament the loss of "intimacy" of the original days. "It was a family affair," commented Dudley Kirk. Even today, van der Tak was struck by the "close-knittedness of demographers."

In the post-World War II period, old arguments over demography's true mission—pure research or applied "social engineering"—became more heated. Subsequently, the expanding family planning movement absorbed more and more demographers. More recently, demographics has been pressed into the service of marketing, planning social programs, voting rights, and a host of other endeavors.

Today, the annual PAA meeting attracts more than 1,000 participants, many of whom are highly specialized.

"[T]o judge by attendance at PAA meetings at any rate, the profession is expanding more in the applied field than in teaching and research," contends Kingsley Davis. "That will give rise to almost unlimited prospects."

How did these leading demographers get into the field? The answer varies greatly. One had "fantasies about numbers in high school," another started with an interest in bees and social insects, others were suddenly taken by something they read, and some took advantage of an available scholarship.

The logical next step for PAA would be a formal history of the organization. More ambitiously, it would be good to see a book on the evolution of demographic research and thought in the United States. (For now, a companion piece might be Dennis Hodgson's recent article, "The Ideological Origins of the Population Association of America," in *Population and Development Review*, vol. 17, no. 1, March 1991.)

Demographic Destinies, in two volumes, is available through the Population Association of America, 1722 N Street, N.W., Washington, DC 20036. Price: $55 for PAA members, $75 for non-members. (Make checks payable to Jean van der Tak.)

—*Win Carty*

Call for Scholars and Interns

PRB Visiting Scholar Award. Applications are invited for the PRB Visiting Scholar Award for the nine-month period beginning September 1992.

The recipient of the award, made possible under a grant from the Andrew W. Mellon Foundation, will spend at least nine months at PRB's Washington, D.C., office conducting a population-related project. Priority will be given to policy-oriented projects that attempt to synthesize work on a particular topic (including the scholar's own contribution). The project may have an international or domestic focus.

The negotiable stipend is comparable with academic salaries and includes transportation costs. Applicants should submit a brief estimate of transportation and salary requirements; applications combining the award with sabbatical leave are encouraged.

Closing date for applications is January 15, 1992. Interested individuals should forward a brief description of their planned activities, curriculum vitae, and a sample of recent publications to: Martha Farnsworth Riche, Population Reference Bureau, Inc., 1875 Connecticut Avenue, N.W., Washington, DC 20009; phone: 202-483-1100.

PRB Internship Programs. The Population Reference Bureau is offering three internships for the 1992-1993 year. The *International Programs Internship*, a 12-month position starting in June or July of 1992, offers an opportunity to help with the production and

Continued on next page

Scholars and Interns
Continued from previous page

distribution of population materials for policymakers in developing countries at PRB and at the Agency for International Development. Applications due: April 3, 1992. The nine-month *Academic Year Internship*, starting in August or September 1992, offers an opportunity to work at PRB in the Policy Studies or Information and Education department. Applications due: April 3, 1992. The three-month *Summer Internship* begins in May or June of 1992. Applications due: February 7, 1992. For more information, contact PRB Internship Program at the address above.

Letter to the Editor

Dear Editor:

Henry S. Shryock, Jr.'s letter (*PT*, July/August 1991, concerning "Infant Mortality: Who's Number One?" in *PT*, March 1991) missed the rather obvious tragedy, and the point of the United States not being "number one" regarding the world's lowest IMR [infant mortality rate].

To the 22,000 [families] of those infants, [who would have survived if the United States had Japan's IMR of 4.4 instead of 10.0 in 1989,] that was not "a tempest in a teapot..." To any observer of the United States, it was also totally unnecessary. That's the tragedy.

And that, Mr. Shryock, is the point.

—Charles W. Snydor, World Relief Office, American Baptist Churches

Mr. Shryock replies:

I agree that our infant mortality rate should be lower than the current 9.1 (and I am almost sure that it will continue to decline). Catching up with the performance of a relatively homogenous, highly educated population such as that of Japan will not be easy, however. Considerable more government spending will be and should be necessary. At least as important is changing the attitudes and behavior of many prospective parents.

SOFTWARE

PROJ3S, a new version of PROJPC, is a population projection program for the personal computer. It was developed by Kenneth Hill of Johns Hopkins University for the World Bank.

The program can carry out several projections forward or back in time. For example, it can run projections for 30 provinces with different assumptions, and then total them for the whole country. The maximum projection period is 75 years—long enough for most applications. PROJ3S can also run two projections together with symmetrical migration flows, such as migration between urban and rural areas of a country.

The user can enter and modify data either through a relatively user-oriented interactive program or by using the text editor. The program checks entries to assure that they fall within accepted ranges. The output format is readable and well-organized. This new version is especially suitable for making projections in low mortality, more developed countries. It uses the latest modification of Coale-Guo model life tables (1989), even extending them further upwards to a female life expectancy of 90 years. The terminal age group (highest ages) can be set to 85+.

PROJ3S is flexible in output options. One can report on special age groupings (such as 5-12, 13-17) as well as the standard five, ten, and single age years. One can also select any calendar year.

PROJ3S requires an IBM-compatible computer with at least 512KB memory and at least one floppy disk drive. PROJ3S (two diskettes and reference guide) can be ordered from World Bank Publications, 1818 H Street, N.W., Washington, DC 20433; or the World Bank Bookstore 202-473-2941. Cost: $32.50.

—*M.Y.*

POPULATION UPDATE

Estimated United States Population:

As of July 1, 1991	252,626,000
As of July 1, 1990	249,975,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1077

Estimated World Population:

As of November 1991	5,415,000,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: June 1991

	12 months ending with June					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,131,000	4,136,000	16.4	16.6	16.0	15.8
Deaths	2,143,000	2,169,000	8.5	8.7	8.7	8.9
Natural increase	1,988,000	1,967,000	7.9	7.9	7.3	6.9
Marriages	2,407,000	2,420,000	9.5	9.7	9.7	9.7
Divorces	1,172,000	1,175,000	4.6	4.7	4.8	4.8
Infant deaths	37,700	38,600	9.1	9.4	9.9	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. *Monthly Vital Statistics Report* (vol. 40, no. 6) from the National Center for Health Statistics.

TAKE A NUMBER

The USSR's Constituent Republics, Past and Present

	Population 1991 (millions)	Births per 1,000 pop.	Deaths per 1,000 pop.	Rate of Natural Increase (%/year)	Pop. 2010 (millions)	Pop. 2025 (millions)	Infant deaths per 1,000 live births	Total fer-tility rate[1]	Life expect-ancy (in years)	% of pop. <15/>65+	% urban
Former Republics											
Estonia	1.6	14.2	12.3	0.19	1.6	1.6	14.7	2.2	71	22/11	72
Latvia	2.7	14.0	12.9	0.11	2.7	2.7	11.1	2.0	70	21/12	71
Lithuania	3.8	15.1	10.7	0.44	4.0	4.1	10.7	2.0	72	23/11	68
Present Republics	**284**	**17.0**	**10.0**	**0.7**	**322**	**356**	**23.0**	**2.4**	**70**	**26/9**	**66**
Armenia*	3.3	24.1	6.6	1.75	4.3	4.9	20.4	2.6	72	30/5	68
Azerbaydzhan*	7.3	25.5	6.0	1.95	10.2	12.3	26.2	2.8	71	33/5	54
Belorussia	10.4	13.9	10.7	0.32	11.1	11.6	11.8	2.0	72	23/10	66
Georgia*	5.5	17.3	8.6	0.87	6.2	6.7	19.6	2.1	72	25/9	56
Kazahkstan*	17.0	21.7	7.7	1.40	22.4	26.4	25.9	2.8	69	32/6	57
Kirghizia*	4.5	29.3	7.0	2.23	6.8	8.9	32.2	3.8	69	37/5	38
Moldavia	4.4	17.6	9.7	0.79	4.9	5.3	20.4	2.5	69	28/8	47
Russia*	148.9	13.5	11.2	0.23	153.7	157.8	17.8	2.0	70	23/10	74
Tadzhikistan*	5.5	38.4	6.2	3.22	9.1	13.0	43.2	5.1	69	43/4	33
Turkmenistan*	3.8	34.1	7.0	2.71	6.0	8.2	54.7	4.3	65	41/4	45
Ukraine	52.0	12.7	12.1	0.06	53.9	55.0	13.0	1.9	71	22/12	67
Uzbekistan	21.0	33.4	6.1	2.73	33.4	45.5	37.7	4.0	69	41/4	41

Sources: *Demographic Yearbook of the USSR*, 1990; USSR Press Bulletin, No. 88, 1991; data provided by Center for International Research, U.S. Bureau of the Census; 1991 estimates by PRB.

*Republics usually considered to lie wholly or partly in Asia.

[1] Total Fertility Rate= the average number of births a group of women would have in their lifetimes, if the current age-specific rates of childbearing remained unchanged.

Announcing "Population: A Lively Introduction"

Population: A Lively Introduction appears this month as the latest in PRB's *Population Bulletin* series. In a highly readable fashion, this *Bulletin* presents basic what, why, and how of the study of demography. While not a comprehensive treatment, it provides an overview of demographic processes and the basic measures used to assess them.

According to author Joseph McFalls: "People find demography fascinating because it deals with so many personally relevant topics. Nearly all the major events of people's lives have demographic implications: birth, schooling, marriage, occupation, childbearing, retirement, and death. If people are not interested in demographic phenomena, they are not interested in themselves."

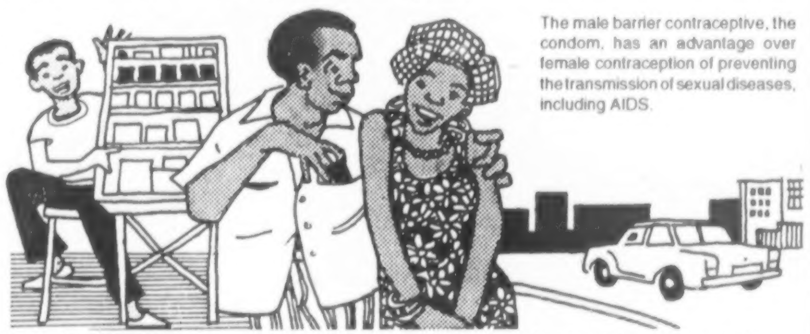
McFalls traces population trends in the world and the United States, surveys the demographic differences among population groups, and examines broad social issues linked to population change. The author is an associate professor at Villanova University and a veteran teacher of introductory courses in population studies. The work is intended to fill a gap in classroom materials.

Population: A Lively Introduction, by Joseph McFalls. Population Bulletin, vol. 46, no. 2. 44 pp. Population Reference Bureau, 1875 Connecticut Avenue, N.W., Washington, DC 20009. Cost: $7 plus $1 shipping each (prepaid); discounts for multiple orders. 202-483-1100.

ADDENDA

Barrier to disease—the male contraceptive

UNFPA



The male barrier contraceptive, the condom, has an advantage over female contraception of preventing the transmission of sexual diseases, including AIDS.

Pocketing a condom from a street vendor: Cartoon emphasizes the male role in contraception.

CURRENT READINGS

A FUTURE OF LOUSY JOBS? The Changing Structure of U.S. Wages, Gary Burtless, ed. Washington, D.C.: The Brookings Institution,1990. ISBN: 0-8157-1179-4; $12.95 (paper).

THE ECONOMIC FUTURE OF AMERICAN FAMILIES: Income and Wealth Patterns, by Frank Levy and Richard C. Michel. Washington, D.C.: Urban Institute Press, 1991. ISBN: 087766-487-0; $15.25 (paper).

These analyses from two premier think tanks tackle the issue of growing income inequality in the United States. They cover much the same time period (the post World War II era) and both seek the causes of deepening income class division in the United States. Both locate a break with historical pattern in the early 1970s, when the wages of less-skilled men (which had been improving since the turn of the century) began to stagnate and decline.

Despite some overlap in content, their perspectives are quite different. Burtless sets out to examine "the decline—or perceived decline—in middle-class jobs" (specifically, men's wages) while Levy and Michels focus on family income and the future well-being of young workers starting out today.

Burtless' book is a collection of essays which grew out of a seminar at The Brookings Institution in March 1989. In the first essay, McKinley L. Blackburn, David E. Bloom, and Richard B. Freeman investigate the declining economic position of less-skilled American men. Rebecca M. Black discusses the pluses and minuses of part-time employment. Linda Datcher Loury looks at the effects of cohort size on post-secondary training. Robert A. Moffitt refutes the idea that the availability of welfare payments has created a disincentive to work. Burtless himself examines earnings inequality over business and demographic cycles.

For Levy and Michel, 1973 (the year of the first oil price shock) was the watershed year for U.S. productivity growth and family well-being. The authors demonstrate first a slowdown in family accumulation of wealth, and then income stagnation. Older, pre-baby-boom couples, however, remained largely unaffected; they were able to accumulate wealth through rising housing values and other means.

The authors project the future wages of the young workers of today, using two scenarios: 1) we will continue at the same level of productivity and growth of today; or 2) the situation will improve slightly. Their analysis shows a striking discrepancy between the probable fortunes of high-school versus college graduates. For example, under a slow-growth scenario, a college graduate who is earning $26,000 at age 30 in 1986 will 20 years later in 2006 earn $43,300—equaling his father's peak earning year. But, take a high school graduate whose father was also a high school graduate. The son, who earned about $18,200 at age 30 in 1986, will experience relatively flat income growth over his career. He will barely exceed his father's peak earning years, even under the higher-productivity scenario. These scenarios hold for two-wage earner families as well.

Levy and Michel recommend a hefty social investment in education of today's young people—for the good of both the individual and society.

—Susan Kalish

POPULATION AND DISASTER, edited by John I. Clarke, Peter Curson, S.L. Kayastha, and Prithvish Nag. Oxford: Basil Blackwell Ltd, 1989. 292 pages. ISBN 0-631-16682-3. $57.95 hardback.

One question that I am often asked during presentations is: "What is the impact of wars, famines, epidemics, earthquakes, and other disasters on population growth?" *Population and Disaster* presents 18 essays that speak to this question. It examines the direct and indirect demographic consequences of a variety of natural and man-made disasters worldwide.

The editors begin and conclude with the problem of defining *disaster*. Coming to no precise definition, they leave the reader with a series of interdisciplinary components through which to measure each incident. Subjects range from natural (such as typhoons, earthquakes, tsunamis) to human-made (for example, war, industrial and nuclear accidents, political interventions) to biological (infectious disease epidemics), as well as disasters of mixed natural and man-made components, such as drought and famine.

The essays on drought in the Sahel and famine in China are the most thorough in their coverage of the immediate and long term effects of famine and displacement on population growth. The article on the Sahel mostly examines theories on mortality, age and sex specific death rates, fertility (and its determinants), and migration. The essay on China's famine of 1959-1961 includes a wealth of historical data, backing up the theories with quantitative examples. Similarly, the essay on the demographic impact of the Spanish Civil War uses data to analyze changes in fertility and mortality and the resulting population structure.

Although the lack of an explicit thematic organization is a weakness, the book provides much helpful information on the immediate and long-term implications of disasters for demographers, geographers, planners, policymakers, and others involved in crisis management.

—Kimberly Crews

SPOTLIGHT

Cuba

Population: 10.7 million
Total area: 44,220 sq. mi.
Population density: 243/sq. mi.
Births per 1,000 pop.: 18
Deaths per 1,000 pop.: 6
Rate of natural increase: 1.1 percent
Total fertility rate: 1.9
Infant mortality rate: 10.7 per 1,000 live births
Life expectancy: 76
Capital: Havana

U.S.
Gulf of Mexico
THE BAHAMAS
Havana
CUBA
Caribbean Sea
U.S. Naval Base
HAITI
JAMAICA

by Alex de Sherbinin

At just under 11 million people, Cuba is larger than all but four countries in and around the Caribbean (the U.S., Mexico, Colombia, and Venezuela). In terms of its demographic and health indicators, Cuba also stands apart. Aside from the tiniest island nations, Cuba has the lowest total fertility and infant mortality rates and the highest life expectancy in all of the Caribbean.

These indicators are attributable in part to medical advances made during Cuba's long association with the United States, and in part to the large investments that the Castro regime has made in human services following the 1959 revolution. Using the People's Republic of China as a model, Cuba's government extended services into poor rural areas previously neglected, and launched a literacy drive which rapidly brought reading and writing skills to over 90 percent of the population. Currently, the Cuban health care system provides universal health and family planning services.

Cuba's fertility rates began to decline in the 1920s, earlier than in most other Latin American countries. Following the 1959 revolution, Cuba experienced a baby boom that lasted until the late 1960s. The most recent fertility decline began in the early 1970s and accelerated dramatically later in the decade, plunging from over four births per woman to replacement level in 10 years.

These declines are mostly attributable to a marked increase in abortions, with rates averaging 440 per 1,000 pregnancies from 1977 through 1986.

Within the past five years, increased use of contraceptives, mostly the pill and IUD, further reduced the TFR (total fertility rate, or average lifetime births per woman) to below replacement levels. Interestingly, Cuban demographers have interpreted the decline in light of Marxist theory, rather than in terms of increased reproductive choice.

In recent years, Cuba has experienced a faltering economy and a declining standard of living, which have contributed to large-scale migration to the United States. U.S. immigration policy, which grants political asylum to any Cuban not convicted of a crime, has helped to hasten the flow which this year is expected to approach 40,000 people—almost one-third the number of migrants recorded during the 1980 Mariel boatlift. Strict emigration laws, which for years have kept Cubans from emigrating, are gradually being relaxed.

Cuba's economic fortune, long tied to that of its biggest trading partner, the Soviet Union, began to slump when the Soviets stopped subsidizing the economy by purchasing Cuban sugar at well over world market prices. Cuba is the third-largest cane producer in the world, and sugar cane had until recently accounted for three-fourths of export earnings. Food and fuel shortages and other economic difficulties are reported.

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POPULATION TODAY

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CLEO Photos

Did the baby boomlet top out in 1991? (See story, p. 3.)

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FROM THE EDITOR'S DESK

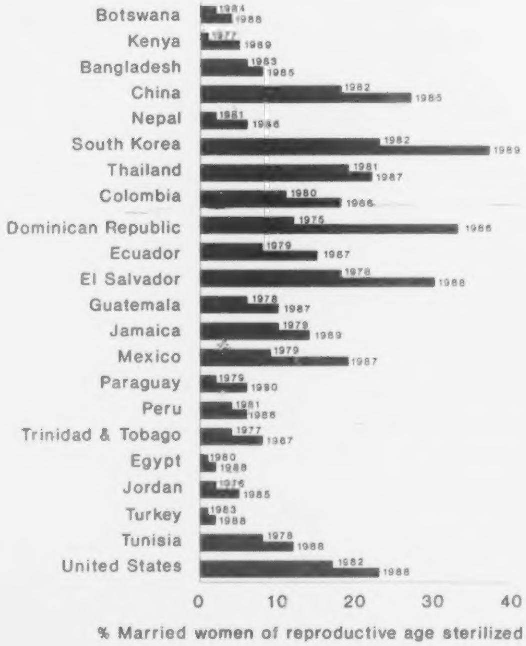
Demographics of charity. Individual charitable contributions in the United States total about $80 billion per year, according to the Washington D.C.-based umbrella group Independent Sector (I/S). Who are the givers, and how much do they give? An I/S survey shows that about three-fourths of U.S. households made charitable contributions in 1989, averaging $978 each (about 2 percent of average household income). Low-income households gave proportionally more (averaging 5.5 percent of income). Men, whites, people over 55, and high-income households gave at higher than average rates.

How much of this goes to benefit the traditional objects of charity, poor people? A forthcoming book by Charles Clotfelter of Duke University attempts to sort out the tangled threads of giving and getting. About two-thirds of contributions goes to churches and synagogues, of which an estimated 6 percent is directed to the poor. Only one-fifth of the charity dollar goes to types of organizations that devote at least part of their resources to the poor, including human services, health, youth development, public benefit, and international organizations. All this would seem to support the conclusions of several scholars in the past that the redistributional effects of private charity are relatively small. But, writes Clotfelter, we still don't know for sure. And, since charitable dollars are tax-deductible, the seemingly private realm of personal giving takes on a public policy dimension.

—Susan Kalish

SPEAKING GRAPHICALLY

Voluntary Female Sterilization: The World's Most-Used Method of Contraception



Growing numbers of women are chosing this increasingly available procedure, especially once they have reached their desired family size.

Source: Contraceptive prevalence and demographic and health surveys; from *Population Reports*, The John Hopkins Population Information Program, Series C, No. 10, 1990.

POPULATION TODAY

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Demographic Editor: Carl Haub
Book Review Editor: Nazy Roudi
Contributing Editors: Nazy Roudi; Nancy Yinger
Consulting Editors: Thomas W. Merrick; Winthrop P. Carty; Sharon Hershey; Alex de Sherbinin; Machiko Yanagishita
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
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Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728
(202) 483-1100

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* Educators, students, and seniors should send supporting documentation

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Recycled Paper

The 1991 Year in Review

The U.S. census came in a little low, and the birth rate may have topped out. On the other hand, immigration laws that went into effect this year caused demographers to up their estimates of that factor in population growth. In this issue, Population Today *recaps some of the biggest demographic events of 1991.*

1990 Census. The national head count of 248,709,873 remained controversial, with an undercount estimated at 1.7 to 2.5 percent. The black population was undercounted by 4.4 to 6.2 percent. Secretary of Commerce Mosbacher decided not to adjust census figures, but Los Angeles County, New York City, and others are still in court over the release of figures from the Post Enumeration Survey (PES) for planning uses. Another census cliffhanger was congressional wrangling over funding for publishing 1990 Census products. The resulting cut of one-third of the funds may produce some delays or cancellation of products.

Immigration up. The big changes of the 1990 Immigration Reform Act went into effect this October, boosting overall immigration levels by about one-third—from 540,000 to 700,000 per year. In addition, an unprecedented, one-time-only, "diversity" program lottery assigned 40,000 Green Cards, chiefly to Europeans (40 percent to Irish), to be given out over the next three years.

End of the baby boomlet? Although provisional data are available only through last summer, monthly tallies suggest that 1991 marked an end to the upward turn in the birth rate. The TFR (total fertility rate, or average lifetime births per woman) probably climbed to replacement level (2.1) in 1990, but receded in 1991. Nonetheless, births will still probably top 4 million in 1991.

Norplant, the matchstick-sized contraceptive implant, began to become available all over the country following its December 1990 approval for U.S. use by the Food and Drug Administration.

More unmarried householders. For the first time, over one in four U.S. households were headed by unmarried persons, according to data from the March 1991 Current Population Survey (CPS).

Poverty increases. The CPS showed that the number of people below the poverty line increased by 2.1 million people between 1989 and 1990, a change thought to reflect the early effects of the current recession. In 1990, 13.8 percent of the U.S. population was poor.

Congress and the administration seesawed back and forth on several issues, including higher funding levels for A.I.D.'s population program, revocation of the Mexico City policy (which prohibits U.S. foreign assistance to organizations that support abortion with funds from any source), and restoration of funding to UNFPA. As a casualty of the recession, the House eventually balked at any reauthorization of the foreign aid appropriations bill, leaving A.I.D.'s population budget at current levels and other issues unresolved.

After emotional hearings, the Senate confirmed Clarence Thomas to the Supreme Court. The addition of another conservative is thought to lay the groundwork for a change in the 1973 decision *Roe v. Wade*, which legalized abortion on the grounds of a woman's right to privacy. In May, the High Court upheld the so-called "gag rule," a 1988 executive branch regulation banning health workers in federally funded Title X family planning clinics from discussing abortion with clients.

The less we know about sex... The Department of Health and Human Services in July canceled a National Institutes of Health (NIH) survey of the sexual behavior of U.S. teenagers. The principal investigator was demographer Ronald Rindfuss, current president of the Population Association of America. In September, the NIH announced it

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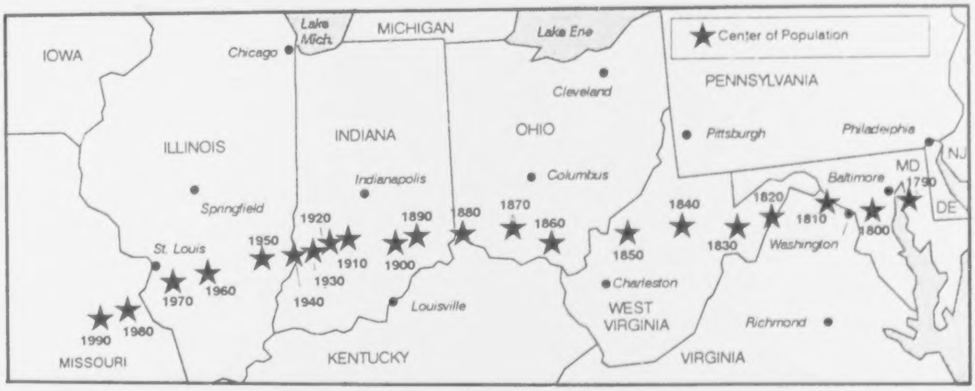
Center Crawls to Crawford County



U.S. Census Bureau

The "center of population" marks the spot where the U.S. population would be in perfect balance if it were a perfectly flat, weightless plane. In the two centuries since the first census was taken in 1790, the U.S. population center has crept 818.6 miles from Chestertown, Maryland. The center, which now sits on a wooded site near Ellisville, Missouri, has steadily slid towards the southwest since about 1920.

Year in Review

Continued from previous page

would shelve its planned survey of adult sexual behavior.

Moving to international population news, 1991 brought us an updated view of much of the world's population. New census data were released from more than 25 countries, including India (844 million), Indonesia (179 million) and Japan (124 million). Adding these to 1990 releases of censuses of China, Mexico, the United States, and the USSR, more than half the population of the world has been counted over the last two years. Several censuses turned out lower than expected, including Spain, India, Mexico, and Indonesia.

A milestone was reached in our understanding of fertility trends worldwide, as the first round of reports (DHS-I) was completed on all 29 countries that participated in the Demographic and Health Surveys. There is some indication of the beginning of a demographic transition to lower fertility in sub-Saharan Africa in countries such as Botswana, Kenya, and Zimbabwe. More recent evidence suggests that fertility is declining in Pakistan and Iran, although momentum keeps growth rates high. For developing countries as a group, the TFR fell from 6.1 in the 1960s to 3.9.

The loosening of central controls in the Soviet Union brought ethnic rivalries to the forefront—punctuated by the three Baltic republics gaining their independence. The War in the Persian Gulf displaced guest workers and created refugees. Ethnic strife erupted into combat in Yugoslavia.

Personalities. This year we noted the deaths of two pioneers of population studies: French demographer **Alfred Sauvy** and geneticist **Robert Cook**. In 1955, Cook won the prestigious Albert and Mary Lasker Foundation award for work on rapid population growth. This year, long-time reproductive rights advocate and incoming chair of the Population Crisis Committee **Robin Chandler Duke** won the same award.

And, also in 1991, PRB became the 131st U.S. Census Bureau Depository Library. As a result, we will add a complete collection of 1991 census publication to our library, to augment publications from the 1970 and 1980 censuses.

—Susan Kalish

SURVEY REPORT

Jordan

WFP/FAO

Fertility is dropping, but Jordanian women still average 5.6 births over their lifetimes.

Preliminary results from the 1990 Jordan Population and Family Health Survey show a 20 percent decline in fertility since the early 1970s. The total fertility rate (TFR, or average lifetime births per woman) declined from 7.7 births in the 1971-1975 period, to 6.6 in 1980-1983, to 5.6 in 1987-1990. A national sample of 6,462 ever-married women of childbearing ages were interviewed.

More than half (58 percent) of respondents had ever used a method of contraception. Thirty-five percent of married women reported currently using some method of contraception, up from 26 percent in 1983. The IUD was the most popular modern method—used by 15 percent of women. Female sterilization (6 percent of respondents) edged out the pill (5 percent). These findings show a shift in contraceptive use from the pill to the IUD and female sterilization compared with 1983.

In general, older women, those living in big cities, women with a formal education, and those who have children are more likely to use contraception. Compared with other countries, the level of fertility in Jordan is high for the level of contraceptive use. Reliance on traditional methods may account for this difference: 27 percent were currently using modern methods and 8 percent traditional.

Knowledge of contraceptive methods is high. Almost all women knew of at least one method of family planning, either modern or traditional. The pill and IUD were the best-known methods; 98 percent of the women knew at least one of these. The next best-known were traditional methods: periodic abstinence (77 percent) and withdrawal (69 percent).

Most women who knew a family planning method also knew where to obtain it. For example, more than 94 percent of those surveyed knew about female sterilization, of whom 85 percent knew where to go to have it done.

The survey showed infant mortality in Jordan had declined to 27 per 1,000 live births. Almost all children under two had received some vaccinations, and almost all are breastfed for at least some time.

There seems to be a strong program promoting DPT (diptheria, pertussis, and typhoid), polio, and measles vaccination in Jordan, according to the report. Of all children 12 to 23 months, 88 percent had received these vaccinations, although coverage declined with successive doses.

—Nazy Roudi

The survey was carried out in 1990 by the Jordanian Department of Statistics and Ministry of Health in collaboration with the Institute for Resource Development (IRD) under the international Demographic and Health Surveys Project (DHS). The DHS division of the Institute for Research Development works under contract to the U.S. Agency for International Development to conduct surveys in Africa, Asia, and Latin America on fertility, contraceptive prevalance, and other population issues. The first round (DHS-I) began in 1984; the second round (DHS-II) began in 1988.

French Eye African Population Issues

Events at a recent international conference held in Paris suggest that the French government is re-examining the importance of population growth to socioeconomic development in Africa.

The September 2-6 conference, "Development and Rapid Population Growth: A New Look to the Future of Africa," was cosponsored by the French government, three United Nations agencies, the World Bank, and the Global Coalition for Africa. Population experts presenting papers included John Caldwell, director of the Health Transition Centre in Australia; Allen Kelley of Duke University; and Allan Hill of Harvard University. Several advocates and practitioners in the field attended and had a chance to comment on the need to expand family planning activities in Africa: UNFPA Director Nafis Sadik, Dr. I. Serageldin from the World Bank, Dr. Fred Sai of Ghana, president of the International Planned Parenthood Federation, and Robert S. McNamara of the Global Coalition for Africa.

The objectives of the conference were laudable: "1) to raise the level of awareness of African and French leaders concerning the specific problems associated with the implementation of developmental policies in the context of rapid population growth; 2) to formulate proposals for action to solve these problems in a way suitable to Africa; and 3) to stimulate research to improve our understanding of the complex interrelationship existing between population and development." The presentations and discussions were wide-ranging and interesting, although the voices of experts from the Third World might have been more fully represented.

In one important development French Secretary of State for Foreign Affairs Alain Vivien told participants that, although France has not given much assistance in the areas of population and family planning in the past, the government would be more open to requests for such assistance in the future.

—Nancy Yinger

Demographers Deemed a Productive Group

Compared with scholars in other disciplines, "population scientists seem to be an unusually active group," says James M. Richards, Jr. of the University of Alabama School of Medicine at Birmingham. Richards, who studies the professional lives of scientists, recently turned to the professional contributions of members of the Population Association of America (PAA).

Focusing on the members of PAA as of 1980, Richards tracked several indicators of their professional activities throughout the 1981-1990 period. The indicators used included: having a publication cited in the *Population Index*; appearing on the program of a PAA meeting; publishing an article in the professional journal *Demography*; serving as an associate editor for *Demography*; and serving as the principal investigator in a federally funded project. Such proxies, of course, do not measure the value of scholarly ideas, or excellence in teaching or applied demographic endeavors.

- By far the most common indicator of professional activity was to have a publication cited in the *Population Index*. About one-fourth of the 1980 cohort of PAA members were so cited during 1981, the first year of the study. This proportion rose to more than half by the decade's end.
- By 1990, 30 percent had participated in PAA meetings.
- By 1990, about one-fourth of 1980 PAA members had served as editorial consultants to *Demography*.
- By 1990, about one-tenth of the 1980 cohort had been published in *Demography*, and an equal proportion had served as principal investigator of a federally funded project.

The study of PAA members links "two professional interests," Richards told *Population Today*: the first, "population issues, which grew out of 1950 neo-Malthusian concerns about population growth" and, second, "a long-term interest in the productivity of scientists." He considers PAA to be a "convenient" group to study issues of the psychology of science. Why? "Good data about their contributions are easily available, and it is a small enough group to be manageable." For example, the PAA directory provided reliable information about the organization's 2713 members in 1980, including highest degree institution and major field, year of highest degree, and position as of 1980—detail that helped in accurately assigning citations and other indicators of activity. Richards displayed highlights of his findings in a poster session at the 1991 PAA meeting in Washington, D.C.

—Susan Kalish

Demographers Most Frequently Published*

Times Cited	Name
67	Dudley L. Poston, Jr.
64	J.C. Caldwell
55	T. James Trussell
54	Ron J. Lesthaeghe
53	Frank D. Bean
52	John E. Knodel
49	Nathan Keyfitz
46	William J. Serow
46	John P. Bongaarts
44	Jacqueline Forrest
44	Kenneth G. Manton
43	Ansley J. Coale
42	Samuel H. Preston
42	Ronald R. Rindfuss
42	Charles F. Westoff
40	Naohiro Ogawa
39	Julian L. Simon
38	Thomas J. Espenshade
38	Noreen J. Goldman
37	Larry L. Bumpass
37	Jan M. Hoem
37	William D. Mosher
37	Roger W. Rochat
37	Andrei Rogers
36	Julie Davanzo
36	Alberto Palloni
36	Mark R. Rosenzweig
34	Leo Morris
34	Lado T. Ruzica
34	Marta Tienda

*as measured by citations in *Population Index*, 1981-1990.

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Glasnost and the Publication of Soviet Census Data

In the spirit of glasnost, the State Committee on Statistics of the USSR (Goskomstat SSSR) and its counterparts in the republics are in the midst of publishing a massive amount of data from the 1989 census. They are also retroactively publishing results from the 1979, 1939, and the suppressed 1937 census (see *PT*, July/August and November 1991).

Goskomstat has released summaries of selected results from the 1989 census in five short reports and in the agency's journal *Vestnik statistiki* (*Herald of Statistics*), in daily press releases, and biweekly press bulletins issued by the Information-Publication Center of the agency. In 1992, Goskomstat plans to issue eleven topical volumes (18 separate books) from the 1989 census.

In the past, the Soviets published very little census data—even for such basic demographic indicators as the age-sex structure of the population, life expectancy, and the infant mortality rate. The Soviets issued just one 368-page volume of results of the 1979 census, and that not until 1984. Now, long-unpublished demographic data is appearing, notably an annual statistical handbook. The single published volume on the 1979 census will be replaced by ten topical volumes (22 separate books) totaling over 6,000 pages. The fourth volume is devoted to the different nationalities of the USSR.

The Russian republic, the Baltic republics (even before they gained independence), and others issued summary volumes for their own areas. Information on the Russian republic includes crucial age-sex structures by oblast (nationality region), population totals for small areas, and an unprecedented amount of detail for the city of Moscow.

—*Timothy E. Heleniak*

Timothy E. Heleniak is an analyst in the Census Bureau's Center for International Research. For more detail see: *Publication of Soviet Census Results*, Soviet Branch Research Note, U.S. Bureau of the Census, June 25, 1991, which lists all census materials that have been published or are scheduled for publication.

SOFTWARE

Survival 3.0 is a versatile life table analysis program for census-based (national) and panel (or follow-up) life tables. It was developed by David P. Smith of the University of Texas School of Public Health. It can handle most of the survival rate [q(x)] formulas in common use. It also estimates multiple decrement and cause-eliminated life tables (for use in medical studies for example) for as many as 23 event categories.

When data are entered for two populations, the program computes statistical tests of their differences, and decomposes the difference in their life expectancies by cause. The user can designate the first population in a series as the reference population, in order to compute standardized rates for other populations entered.

The documentation shows five examples of program applications. Three concern constructing national life tables, and use midyear population estimates and annual deaths from vital statistics. Two are samples from medical studies, in which individuals are coded by duration of observation and events are coded by duration at occurrence. Users can print out either all life tables generated by the program or summary tables only.

The program is written for computers using MS DOS, version 3.3 or higher, and requires 192k of RAM. It can be formatted for earlier versions of DOS by request. The cost is $10 for program and manual, from the Center for Health Policy Studies, University of Texas School of Public Health, P.O. Box 20186, Houston, TX 77225.

POPULATION UPDATE

Estimated United States Population:

As of September 1, 1991	253,111,000
As of September 1, 1990	250,472,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1079.

Estimated World Population:

As of December 1991	5,422,750,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: June 1991

	12 months ending with June					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,131,000	4,136,000	16.4	16.6	16.0	15.8
Deaths	2,143,000	2,169,000	8.5	8.7	8.7	8.9
Natural increase	1,988,000	1,967,000	7.9	7.9	7.3	6.9
Marriages	2,407,000	2,420,000	9.5	9.7	9.7	9.7
Divorces	1,172,000	1,175,000	4.6	4.7	4.8	4.8
Infant deaths	37,700	38,600	9.1	9.4	9.9	10.0

Note: Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source: *Monthly Vital Statistics Report* (vol. 40, no.6) from the National Center for Health Statistics.

PRB Internships

International Programs Internship. PRB offers a 12 month internship starting in June or July of 1992, as part of its Cooperative Agreement with the U.S. Agency for International Development (A.I.D.). The intern will help with the production and distribution of population materials for policymakers in developing countries. The salary for the full-time position is $19,000-$22,000 annually, depending on academic background and experience. Classes or work experience related to population or public health, as well as language skills (preferably French or Spanish), are required. This internship is open to U.S. citizens only. Deadline for application: April 3, 1992.

Academic Year Internship. A nine-month internship, starting in August or September of 1992, is also available. The intern will work at PRB in either its Policy Studies or Information and Education department, depending on interests and needs. Candidates should demonstrate interest in a specific population-related area (such as the relation between population trends and particular public policies, or the collection and dissemination of demographic data). The intern generally works 35 hours a week, receiving a stipend of $8.00 per hour. Deadline for application: April 3, 1992.

Summer Internship. Three-month summer internships are available, beginning in May or June of 1992. Duties, work schedule, and stipend are similar to the Academic Year intern. Deadline for application: February 7, 1992.

Send resume and letter of application to:

Internship Program
Population Reference Bureau, Inc.
1875 Connecticut Avenue, N.W.,
Suite 520,
Washington, D.C. 20009.

Describe completed academic studies, interest in the field of population, and supply any additional information to support candidacy. Two letters of recommendation from instructors should be sent separately. Note: Please indicate clearly the position(s) being applied for.

TAKE A NUMBER

Belgium up, Spain down. Two European countries (Belgium and Spain) have reported benchmark population totals in the recent press.

The Belgian population hit 10 million for the first time in history. Numbers of children are also increasing, according to the French newspaper *Le Soir*. In Belgium, the population register (*Rijksregister*) recorded 10,000,963 inhabitants on August 16. In addition, for the first time in 20 years, an increase in the number of children was reported. The Belgian birth rate has increased slightly, particularly in French-speaking Wallonia. *Le Soir* reports that the total fertility rate rose to 1.62 average lifetime births per woman in 1990, from its 1985 low of 1.49.

In contrast, Spain's March 1991 Census count came in somewhat lower than expected: 38,425,679 people. This total is up almost 2 percent since 1981, but about 700,000 lower than the figure "hoped for," according to the newspaper *El Pais*. The drop is steep enough to cause an upward revision in birth rates, death rates, unemployment figures, and other rates based on population totals.

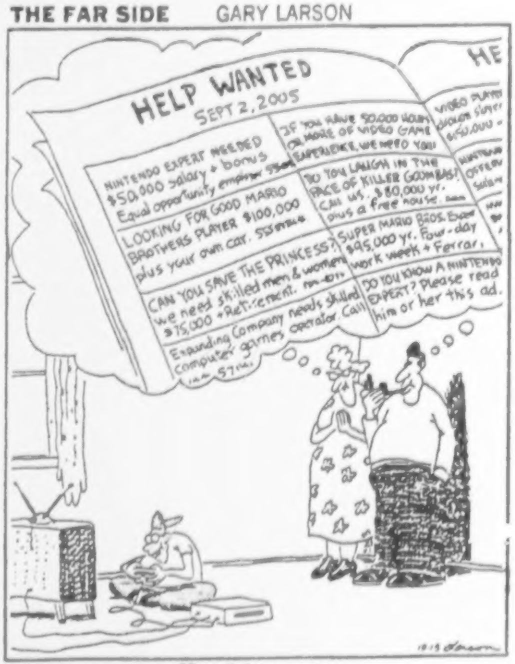
The reasons for the low count are being debated. Demographic analysis suggests that an undercount may have occurred, according to Spain's Institute of Demography. Between the censuses, Spain had natural increase (births minus deaths) of 1,450,000 and net immigration of 300,000—which should have resulted in a 1.75 million increase in population since 1981. Another possibility is that the 1981 count was inflated by deceased individuals who had not been deleted from the roles. Spain's very sharp drop in the birth rate in recent years does not explain the low count. Although officials are denying it, some suspect that privacy campaigns may have resulted in resistance to the census.

—*Carl Haub*

ADDENDA

Training the workforce of the 21st century

THE FAR SIDE GARY LARSON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CURRENT READINGS

THE FAMILY PLANNING MANAGER'S HANDBOOK: Basic Skills and Tools for Managing Family Planning Programs, by James A. Wolff, Linda J. Suttenfield, and Susanna C. Binzen. West Hartford, CT: Kumarian Press, 1991. 373 pp. ISBN 0-931816-72-6. $34.95.

BEYOND THE CLINIC WALLS: Case Studies in Community-Based Distribution, by James A. Wolff, Robert Cushman, Jr., Florida A. Kweekeh, C. Elizabeth McGrory, and Susanna C. Binzen. West Hartford, CT: Kumarian Press, 1990. 162 pp. ISBN 0-931816-08-4. $14.95.

Management Sciences for Health, a Boston-based organization, has put together these two practical volumes to help improve the design and management of family planning programs, particularly in the developing world. Both address important issues and are written in a clear, simple, accessible style. These books should prove very useful to family planning program managers.

The *Handbook* is a comprehensive guide on how to address common management issues, including strategic planning, developing workplans, coordination, staffing, supervision, training, logistics, finances, and use of information. Although quite lengthy, the contents are user-friendly. The authors employ a variety of formats to highlight their points: checklists, sample forms, actual country examples, "vignettes" (fictionalized case studies), and glossaries. This is not a book that most people will sit down to read from cover to cover, but many program managers may turn to it again and again as they struggle with particular management concerns. It could also serve as a background text for a course in program management.

Beyond the Clinic Walls focuses on one particular type of family planning program—community-based distribution (CBD)—and is designed to be a training manual with "case learning points" and questions for discussion. It is based on a series of case studies for a fictionalized African country. That the case studies were not about real countries or programs was somewhat disappointing. And while the authors should be commended for the book's purpose, organization, and clear language, the cases come across as sanitized. The problems faced by the Family Planning Association's director are just too neat; for example, the otherwise excellent evaluation staffer is too busy to accomplish all his tasks. Still the book will be useful as one component of a training course on CBD, balanced by some messy, real-world situations.

—Nancy Yinger

FROM PYRAMID TO PILLAR: Population Change and Social Security in Europe, by the International Labour Office, Geneva. 1989. 187 pages. ISBN 92-2-106497-2. $22.00 paperback.

This book discusses the problems brought about by changes in the age composition of European countries. The study focuses on specific socioeconomic issues, such as the shortage of young workers along with falling birth rates, growing number of single parents, increasing women's labor force participation, changing retirement patterns, income maintenance for the elderly, and the rising cost of medical care and pension programs.

The "pyramid" and "pillar" in the title refer to the familiar change in the appearance of the population pyramid from a "Christmas tree" outline to a columnar shape as fertility and mortality fall and the population ages. The title thus captures the underlying demographic changes that underlie such issues as the future of social security systems. Today's social security systems were first implemented in a world in which the age structure was more like a pyramid, where the spreading base contained enough young people to support a smaller group of older people.

This book and Wolfgang Lutz' *Future Demographic Trends in Europe and North America: What Can We Assume Today?* (see review, *PT* June 1991), provide useful overviews of the demography of contemporary Europe. It is unfortunate that both studies were completed before the very recent upturns in fertility became apparent.

—Machiko Yanagishita

INVENTORY OF LONGITUDINAL STUDIES IN THE SOCIAL SCIENCES, by Copeland H. Young, Kristen L. Savola, and Erin Phelps. Newbury Park, CA: Sage Publications, Inc., 1991. 563 pp. ISBN: 0-8039-4315-6. $51.95 hardback.

In recent decades, longitudinal studies have enriched our understanding of the life course of children and youth, young adults, mothers and families, labor force participants, representatives of different socioeconomic classes and races, and a myriad of other topics. This volume is sure to make these studies more accessible.

The compendium lists studies alphabetically by name of principal author, outlines the research design, techniques, times and length of data collection, and sample size. It also lists major variables such as gender, age, socioeconomic status, and race/ethnicity. This useful inventory combines and updates two earlier volumes: *Inventory of Longitudinal Studies of Middle and Old Age* (Migdal, Abeles, and Sherrod, 1981) and *Inventory of Longitudinal Research on Childhood and Adolescents* (Verdonik and Sherrod, 1984). The book comes from the Henry A. Murray Research Center of Radcliffe College and the Social Science Research Council working under a grant from the National Institute of Mental Health.

—Susan Kalish

COLOMBIA

Population (mid-1991 est.): 33.6 million
Land area: 439,512 sq. mi.
Births per 1,000 pop.: 26
Deaths per 1,000 pop.: 6
Rate of natural increase: 2 percent
Total fertility rate: 2.9
Infant mortality rate: 37 infant deaths per 1,000 live births
Life expectancy at birth: 68
Capital: Santa Fe de Bogotá

by Jorge Ruiz

Caribbean Sea
Cartagena
PANAMA
VENEZUELA
Medellin
PACIFIC OCEAN
Bogota
Cali
COLOMBIA
ECUADOR
BRAZIL
PERU

Colombia, about three times the size of California, is located at the northwest tip of South America, just north of the Equator. The Isthmus of Panama, which joins North and South America, meets its northwest coast. Colombia is thus well-situated for trade: it is the only country in South America that has coasts on the Pacific Ocean and the Caribbean, and has access to the Amazon River.

The Andes Cordillera divides into three ranges within the country, forming high plateaus and valleys. Since altitude compensates for latitude in tropical regions, the majority of the population lives in the more pleasant mountainous region. Colombia recently edged out Argentina as the third most populous country of Latin America, after Brazil and Mexico. Colombia has a dispersed urban population, unusual for Latin America.

Over the past 20 years, the Colombian economy has grown steadily. By Latin American standards, foreign debt is under control and inflation was moderate during the 1980s, about 27 percent per year. The per capita GNP was U.S. $1,240, average for the region. Nevertheless, a considerable number of Colombians have not benefited from economic progress. Urban and rural poverty is a serious problem and, due to the high government deficit, social programs have been reduced. Many Colombians have become economic emigrants to neighboring countries, the United States, and, more recently, to Western Europe.

Colombia has experienced guerrilla warfare for four decades. More recently, drug trafficking has made violence a leading cause of death. The impact of laundered money in Colombia's economy is a matter of some debate. Most evidence tends to support the thesis that drug money has worsened inflation and is spent on luxury goods, not on economy-building capital investments.

Colombia's government supports family planning. The private, nonprofit organization PROFAMILIA, an affiliate of the International Planned Parenthood Federation, provides 60 percent of family planning services available in the country. Fertility surveys indicate that Colombia's TFR (total fertility rate, or average lifetime births per woman) is the lowest in tropical South America: 2.9 children per women. Colombia is approaching the low TFR levels of the Southern Cone countries such as Argentina or Chile. Colombia's TFR is also lower than Panama's, where fertility declines occurred much earlier.

Four-fifths of mothers surveyed in the second round of Demographic and Health Surveys have had some prenatal care, and almost two-thirds of the children under five have completed their immunizations. Sterilization is the most common method of contraception, followed by the pill and IUD.

Colombia's fertility decline started in the early 1960s, before government-sponsored family planning programs were instituted, but most of the fertility decline during the past 25 years is attributable to contraceptive use. The effectiveness of family planning efforts are all the more striking given that the vast majority of Colombians are Catholic.

Jorge Ruiz is a demographer and a consultant for the Pan American Health Organization.

POPULATION REFERENCE BUREAU, INC.
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POPULATION TODAY

Vol. 20, No. 1 January 1992

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Michael Siluk

Extending the lifespan—costs for success? (See page 6.)

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FROM THE EDITOR'S DESK

Do demographer's have anything to add? One can hardly turn on the television or radio these days without hearing some well-known economist being interviewed on the state of the U.S. economy and its impact on the American people. But what about demographers? Do demographers have anything to contribute to these discussions?

"Definitely," says PRB President Tom Merrick, a demographer whose formal degrees are in economics. "Economists," he points out, "analyze events from a short-term perspective, generally too short for demographic change to occur. As a result, they don't look at the impact of demographic change. So they tend to miss it."

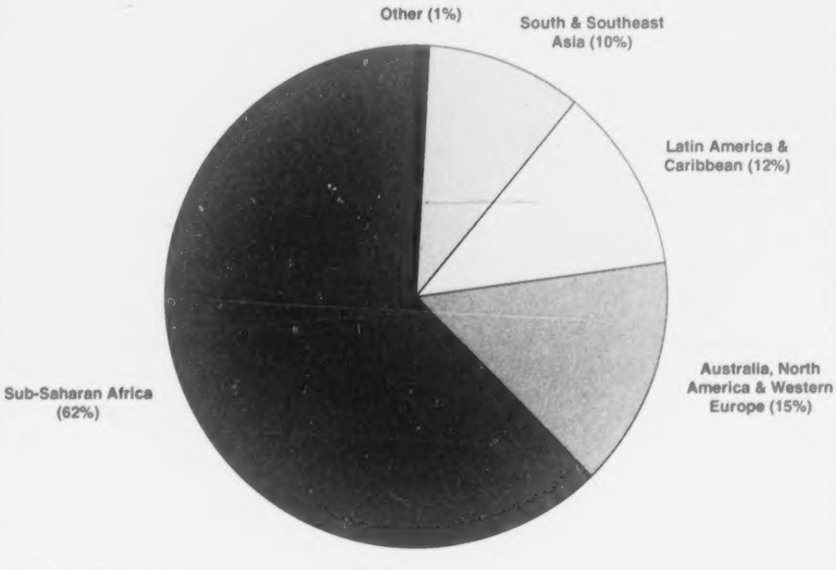
One of the developments often missed is the effect of recent changes in household structure, which make some people more vulnerable than others to hard times. The proportion of nonfamily households is growing. The share of people living in a married-couple household—with its built-in capacity for a two-wage income—is diminishing. Having two wage earners not only brings in more income, but also can provide a slight hedge if one of the partners suddenly becomes unemployed.

Demographers often adopt a life-course perspective, as Martha Farnsworth Riche, PRB's director of policy, likes to point out. About half of the households in the lowest one-fifth of the income distribution are headed by people either too young, or too old, to be in their prime working years. Often life events—such as getting married, starting a family, getting divorced, becoming a widow—can dramatically alter one's income and vulnerability to hard times, or fortify one against them.

—*Susan Kalish*

SPEAKING GRAPHICALLY

HIV Infections by Region



(Percentages are approximate)
Source: World Health Organization

This chart shows the approximate percentage distribution by region of HIV-infected adults who will develop and die of AIDS. Their numbers are estimated at 9 to 11 million as of late 1991.

POPULATION TODAY

VOL. 20, NO. 1 **January 1992**

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Demographic Editor: Carl Haub
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Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728
(202) 483-1100

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Other organizations	200	250

* Educators, students, and seniors should send supporting documentation

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Recycled Paper

New Era Raises Questions for European Demography

CONGRÈS EUROPÉEN
DE DÉMOGRAPHIE

PARIS – 21/25 OCTOBRE 1991

What a difference four years makes! When the last European Population Conference was held in June 1987, the Berlin Wall was still standing, East Germany was a separate country, a draconian form of pronatalism existed in Romania, and the Baltic republics were still part of the USSR.

The 1991 European Population Conference convened on October 21st in the Salle Bleu of the Palais de Congres on the western edge of Paris. The conference, held every four years, was sponsored by the prestigious French Institut National d'Etudes Démographiques (INED), the International Union for the Scientific Study of Population (IUSSP), and the European Association for Population Studies.

Over 600 demographers were in attendance, their numbers swelled by an unprecendented number of attendees from former "Iron Curtain" countries. Name tags gave ample evidence of the new (and, perhaps, future) Europe: Latvia, Estonia, Lithuania, Ukraine. Many were armed with previously unseen data, enjoying an apparent new freedom in the choice of study topics.

Gérard Calot, INED's director, sounded the keynote with hopes that the conference would prove to be an "opportunity for giving," enhanced by the recent removal of political barriers. The keynote speech set another theme: the conference should also consider European responsibility within the world community.

It was evident that no longer are Europe's demographic concerns solely centered on aging societies, low fertility, the problem of guest workers who become permanent residents, and immigration pressures from developing countries. The more recent, and unexpected, issues are those raised by the political changes in Eastern Europe. No longer ideologically bound, closed societies "over there," these countries are coming into their own as players on a greatly expanded European stage.

Yet, the new players are not equal, certainly not economically. To what extent will new freedoms prompt citizens to leave, producing new immigration pressures on the West? Would-be immigrants from Eastern Europe will join those from the "South," particularly former African colonies and, perhaps, compete for immigration rights.

Dirk van de Kaa of the Netherlands, spoke of European demography at the "end of history." This apt phrase recognized that Europe has come to a singular juncture in its demographic and political history—low birth rates signal the end of the demographic transition and the fall of the Berlin wall symbolizes an end to postwar barriers. Van de Kaa felt that, while Europe had become a continent of immigration, the size of expected flows could be exaggerated, and doubted that Europe would be "flooded" with immigrants. Still, changes are to be expected. More economic cooperation with countries of the East is likely, he said, rather than with the Third World.

Massimo Livi Bacci of Italy said that the old Western Europe, which has consisted of essentially six countries since 1945 is a thing of the past. David Coleman, of Oxford University, noted that European immigration is not like that in the United States. European countries limit citizenship and are not always accepting of new permanent residents. With 10 million unemployed in Europe, why would countries open their doors?

In the discussion period on immigration, a Czech speaker identified the threat of a "brain drain" as his chief concern: the West might take only the best the East has to offer. Van de Kaa agreed that this was a concern.

And what of Europe's low birth rates? The mood was one of doubt that the future will bring any large increases. Charlotte Hohn of Germany noted that late childbearing is not prevalent in Germany, suggesting that we cannot

Continued on next page

And the World's 3rd Biggest Country is....

It looks as if the United States could become the world's third biggest (that is, most populous) country.

The United States, with 253 million people in 1991, has long stood as the world's fourth biggest country, behind the USSR (292 million). Leading both by far are India (with 859 million) and the demographic billionaire, China.

With the breakup of the Soviet Union, country rankings are in flux. Reconstituted as the Commonwealth of Independent States (minus the Baltics), the former USSR would have 284 million people, and remain number three. A union of three—Russia (149 million), Ukraine (52 million), and Belorussia (10 million)—would rank as the fourth largest; and Russia by itself, sixth largest.

European Demography
Continued from previous page

explain Europe's low fertility as a temporary phenomenon due to childbearing delays. Discussing Italy's head-turning low fertility (TFR = 1.3 average lifetime births per women), Valerio Terra-Abrami, of Italy's National Statistics Institute, pointed out that birth cohorts of women in the North have remained below replacement since the 1920s.

The interest of the French government in the demographic issues discussed at the conference was demonstrated in the personal sponsorship of the conference proceedings by French President Mitterand and in a lavish reception held at the invitation of the mayor of Paris. A statement was read on the problems of European and world population growth.

Other conference snippets: U.S. demographer Paul Demeny remarked that socialism had propped up Eastern European fertility and that UN projections now show no difference in future birth rates between East and West...a commentor agreed, saying that Eastern Europe will return to a low fertility transition underway before World War II...an Algerian commentor said that his country had only a 3 percent rise in purchasing power in 20 years. As the educational level rises, more people will want to leave...echoing this statement, a speaker from Rabat, Morocco said that freedom of circulation should be allowed, particularly among relations in Morocco and Europe. A charter of rights of foreigners should be established. Interchange between Europe and North Africa should consist of more than just "oranges and sardines."

In sum, the conference dealt with themes that went to the heart of the European dilemma between the desire to maintain traditional cultures and the recognized moral obligation of rich countries to poor ones.

There was no escaping this overriding theme and the discussions were franker than is often the case at demographic meetings. The tug-of-war between the two sides of this issue is a difficult one, as the recent anti- and pro-foreigner demonstrations in Germany illustrate. Coming away from this conference, one thing was clear: these issues will not be solved easily or soon.

—Carl Haub

AIDS Strategy Announced at Conference

During the annual AIDS Prevention Conference in November, the World Health Organization (WHO) released its latest estimates of the number of HIV-infected adults: 5.9 million men and 4.8 million women worldwide are carrying the virus that causes AIDS. By the year 2000, these numbers have the potential to increase almost four times. Currently, southern and central Africa account for almost two-thirds of all HIV-infected adults (see Speaking Graphically, page 2); however, the rate of infection is increasing faster in Asia and Latin America.

The U.S. Agency for International Development (A.I.D.) announced its new AIDS prevention program. The program contains three primary strategies, two of which require behavioral changes: reduce the number of sexual partners and use condoms correctly and regularly. The third requires investments in health services to diagnose and treat sexually transmitted diseases (STDs). STDs facilitate the spread of AIDS because they amplify the risk of transmission, as Dr. Peter Piot of WHO pointed out.

A.I.D.'s three-part strategy will focus on 15 countries—eight of them already chosen: Malawi, Uganda, Zaire, Zambia, Thailand, Brazil, Haiti, and Jamaica. Unfortunately, the programs in both Haiti and Zaire have been postponed because of political unrest.

Progress made to date in countries such as Zaire has lost its momentum because of war and fosters the spread of AIDS, said Dr. Jeffrey Harris, coordinator of A.I.D.'s AIDS programs. War creates a movement of normally sedentary populations, which carries the disease to other areas. Spouses are separated for extended periods and are thus more likely to seek extra-marital relationships; and values such as marital fidelity may be undermined through the stress of war and displacement.

Not only is AIDS one of the leading causes of adult deaths in many developing countries, said Harris, but it also takes its toll on already overburdened health care systems and on economic development. Recent efforts to slow the spread of HIV have been "too little, too late, and too diffused," commented Dr. Peter Lamptey, director of Family Health International's AIDSTECH.

A.I.D., already the largest funder of AIDS programs in the developing world, expects to spend another $385 million during the next five years to create and implement AIDS policies and programs.

—Sasha Loffredo

Announcing:

Baby Boom—Entering Midlife

This new PRB study "takes a fresh look at the baby-boom generation—why we accord it special attention... and how it will reshape U.S. society."

By sheer size alone, the baby boom—more than 80 million Americans in 1990—is America's largest generation ever. It forced adjustments in schools, government programs, and markets for labor, housing, and consumer goods.

The study examines the baby-boom generation today in terms of its economic status, household formation, marital status, family size, political participation, and education. Leading-edge boomers, born 1946-1954, and trailing-edge boomers, born 1955-1964, often led quite different lives.

The report was written by Leon Bouvier, an adjunct professor at Tulane University and Carol J. De Vita, PRB's director of publications.

Baby Boom—Entering Midlife, by Leon Bouvier and Carol J. De Vita, *Population Bulletin* Vol. 46, No. 3. Available from the Population Reference Bureau, 1875 Connecticut Avenue, N.W., Suite 520, Washington, DC 20009-5728 (1-800-877-9881). Price: $8 per single copy, discounts for multiple orders.

Annual Dinner Honors Beale, McClure

McClure: accurate data, by itself, cannot dispel social myths.

The staff of the Population Reference Bureau strolled across T Street to the Washington Hilton Hotel the evening of October 31, to meet with trustees and friends at PRB's Annual Dinner. The occasion marked the 62nd year of PRB's founding.

PRB Board Chair, the Honorable Joseph L. Fisher announced the election of Frances Garcia, Lenneal Henderson, and Anne Firth Murray as honorary fellows, in recognition of their long service on the Board of Directors.

Calvin L. Beale, senior demographer at the Economic Research Service of the U.S. Department of Agriculture, received PRB's annual award "for outstanding contributions to increased understanding and awareness of population issues."

Peter Morrison, director of the Population Research Center of the RAND Corporation, made the award, calling Beale's work "scholarship of the highest order while presenting fresh ideas" and Beale himself a "demographer humanist." Morrison edited Beale's 1990 book, *A Taste of the Country.*

Beale has visited about half of the approximately 2,400 nonmetropolitan counties in the United States and reputedly can tell you where to get a decent cup of coffee in each.

"I always wanted to be a demographer," Beale remarked. Born and raised a city boy (in Washington, D.C.), he became a leading expert in the demography of rural areas. He worked at the Census Bureau from 1945 to 1953 and, since then, at the U.S. Department of Agriculture. He made outstanding contributions to our understanding of rural-urban migration, commuting patterns, and the so-called "edge cities" (on the fringes of old central cities).

Wesley C. McClure, PRB board member and president of Virginia State University, delivered an eloquent and challenging address. Numbers are not "mere empirically neutral artifacts," he stated, but can be used to shore up negative myths about minorities, women, the elderly, or other groups—myths that carry a powerful political impact. He asked demographers to be both sensitive and vigilant in "what images we invent, dispel, or recreate."

There is a "long history of demography in the service of distortion" which has led to unfortunate public policies, McClure pointed out. Yet, presenting more accurate data in itself may not be sufficient to "defeat myths." For example, if demographers fail to draw the link between high unemployment and the "clear significance of [economic] structural factors on the life choices of African American males," the public may interpret the data through long-held myths about character faults of black men and flaws in the black culture.

McClure pointed to a disturbing possibility: that hard times and social disorganization could rekindle the Calvinist belief in the "essential viciousness of all people." Such an attitude, he argued, bolsters public policies that give up on the very possibility of reform.

—Susan Kalish

McClure on Demography

"[P]ersons responsible for compiling and studying human populations must receive the caution of W.E.B. DuBois: to 'read with patience' the meanings implied by the numbers we use to describe communities.

"This caution is particularly true when we are gathering data about race, gender, age, sexual preference, physical or mental challenges, and poverty. These are categories that conjure images and inflame political rhetoric. Those who graph the world must recognize that with the stroke of pens, the flow of computer printouts, demographers make social metaphors, and "tell stories" that will be used to make decisions about the local and world community. We can never lose sight of the danger and promise inherent in our efforts to paint accurate pictures of life in this century....

"There are those who would argue that the value of demographic science is that it holds out the promise (and in many ways has lived up to it) of defeating myths in the mere activity of presenting more accurate data.

"Champions of demographic science can argue that, despite the methodological limitations (many of which can never be overcome and are simply problems inherent of the act of collecting data), transformations and improvements in the discipline are cause for optimism. It is, they would argue, those who misuse or misinterpret the data, who assign meaning where there is none, or who attach wrongful meanings, who undermine significant methodological advances.... I would argue that such optimism about the...techniques of the science are overstated and premature. While we must always be self-conscious in the design and use of our tools and methods, this alone cannot dispel [society's negative] images."

—*Dr. Wesley C. McClure*, from his talk, "An American Perspective: Thoughts on Race, Gender, and Politics."

Estimating the Upper Limits to Human Longevity

by S. Jay Olshansky

What are the upper limits to human longevity? Why is it important to try to find out?

As individuals, we often consider how diet or exercise affects our health. Will these behaviors have a payoff in longer life? And, if they do extend life, what will be the quality of life when we get there?

Pushing Mortality Downward

Lifespan is the theoretical average upper limit to human life—assumed to be built into the biology of the species.[1] In contrast, *life expectancy* (or *period life expectancy*) is a summary measure that is calculated from age-specific death rates most often observed during a *single year.* The life expectancy at birth for babies born in the United States in 1990 was 75.4—72.0 for males and 78.8 for females. For those who reached the age of 65 in 1990, their expected remaining lifetime was 17.3 years. As period life expectancy increases, it converges with the average lifespan of the species.

Ordinary life expectancy estimates, however, are notorious for underestimating longevity since they rely on the assumption that all age-specific death rates that prevail today will be in force for everyone in the population for the remainder of their lives. When the health conditions of a population are improving as they are today, life expectancy will *underestimate* actual longevity.

Demographers have come up with several methods of estimating average lifespan, with mixed results.

One method constructs composite mortality profiles that contain the lowest age-, sex-, and cause-specific death rates observed in developed countries during a single time period.[2] Using international mortality rates observed in 1980, the upper limits to life expectancy at birth were estimated to be 81 years for females and 75 years for males (see figure). This approach has two problems. First, if the same procedure were applied to data from 1990 instead of 1980, the 'upper limit' would increase—thus implying that the average lifespan for the species itself is increasing. This is not likely to be the case. Second, different countries sometimes use different methods of classifying underlying causes of death, leading to some highly improbable rates.

A second method partitions death rates into those attributable to exogenous causes (such as infectious and parasitic diseases, accidents, homicide), and endogenous causes (such as cardiovascular diseases and cancers).[3] The exogenous causes are then hypothetically eliminated using standard life-table methods. The lower bounds of endogenous mortality are then derived from the most favorable set of age-sex-specific mortality rates observed for a given country during a given year. Using mortality rates observed in 1978, this method resulted in an estimated upper limit of 80.3 years for females and 73.8 years for males.

This cause-elimination method, however, results in a shifting upper limit if more recently observed death rates are used. In addition, the cause-elimination method relies on the assumption that diseases operate independently of each other, and that the elimination of one disease does not influence the risk of death from other diseases. We know this to be untrue.

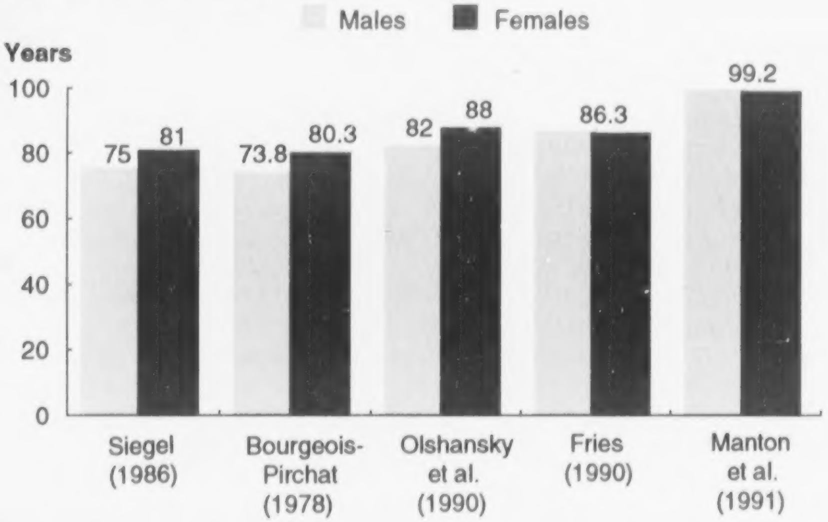
In a third approach, observed trends in life expectancy at birth and at age 65 are linearly extrapolated or extended to the point at which these trend lines appear to converge.[4] Since these trend lines cannot logically cross, (because life expectancy at age 65 exceeds life expectancy at birth) the point of convergence is believed to represent an estimate of the average lifespan of the population. Using data from the United States and Japan, this method estimated the average lifespan for humans to be between the ages of 85.1 and 86.3. One difficulty, however, is that factors that have nothing to do with the average lifespan of the population—the time frame chosen as the basis for extrapolation and changes in infant and child death rates—can change the estimates. Additionally, as mortality at younger ages plateaus, life expectancy at birth will increase in parallel with life expectancy at age 65, instead of converging with it.

A fourth method focuses on risk factors. The risk-factor paradigm is central to medical research's treatment of disease and health-promotion and disease-prevention programs.[5] For example, a sedentary lifestyle and certain dietary habits are considered to be risk factors for heart disease. The risk factor approach quantifies the *changes* in mortality rates and life expectancy that result from modifying population-level risk factors for major fatal diseases. The theoretical manipulation of population-level risk factors to optimum levels should therefore allow researchers to obtain estimates of the upper limits to human longevity (assuming, of course, that it is less than completely favorable risk factors that account for the disparity between observed life expectancy and average lifespan). Depending on definitions, this method has resulted in an estimated average lifespan for the population that ranges between 85 and about 100 years.

The risk-factor model also has some limitations, however. First, studies have demonstrated that the adoption and maintenance of extraordinarily healthy, active lifestyles result in a life expectancy that is only 1-2 years higher than that of a comparable group of people who are sedentary their whole lives. Other studies sug-

S. Jay Olshansky is a research associate in the Department of
Medicine at the University of Chicago and a scientist at
Argonne National Laboratory

Figure 1. Estimates of the Human Lifespan



gest that even if the entire population adopted healthy lifestyles, death rates would only fall far enough to place period life expectancy at birth at about 85 years. For life expectancy to rise as high as 100 would require the entire population to remain functional and exhibit 'optimal' risk factor behaviors their entire lives—a highly improbable scenerio.

As an alternative to these more theoretical models, my associates and I at the University of Chicago and Argonne National Laboratory sought to define the mortality reductions that would be required to increase life expectancy from its present level to between 80 and 120 years.[6] Then we examined such declines in light of the relative contributions of major fatal diseases to total mortality, and how much progress would have to be made in reducing death rates from each in order to achieve such an extreme longevity. We saw this as a way to distinguish between what is *theoretically* achievable and what is *practically* achievable with existing medical technology. The result? To increase U.S. life expectancy from its current 75.4 years to 85 years (82 for men and 88 for women) would require reductions in current death rates of 55 percent (60 percent at ages 50 and older). Given that mortality reductions of this magnitude would require the equivalent of the complete elimination of heart disease and cancer, it is implausible that life expectancy at birth will exceed the age of 85 given present technology. Precautions on disease interdependence apply here as well.

Consequences of Living Longer

To extend the lifespan, it would be necessary to slow down aging itself. There is no definitive evidence at this time to indicate that the lifespan of humans can be modified by any means. However, on the horizon are drugs that may supplant the loss of functionality of genes that directly or indirectly regulate the aging rate. The mapping of the human genome may reveal aging-related genes. It may eventually become possible to manipulate the human genome to favor longevity. There is reason to be optimistic that methods of increasing the average lifespan of the human species may soon become available.

To gain some appreciation of the possible consequences of boosting the average lifespan upward, we simply have to look at current discussions about ongoing reductions in old-age mortality. The debate is framed around what is generally referred to as the expansion versus the compression of morbidity hypotheses.

Those who follow the compression school of thought believe that improved lifestyles and advances in medical technology will postpone the onset of disease until older ages, thus compressing the period of disease and disability into a shorter time before death. The expansion of morbidity hypothesis, however, points out that factors that are known to reduce the risk of death from fatal diseases do not alter the age at onset or progression of the most debilitating diseases of old age (such as Alzheimer's disease, osteoporosis, osteoarthritis, and hearing and vision loss). Further reductions in old-age mortality from present levels would therefore allow much larger segments of the population to survive into the oldest-old ages (age 85+), where the risk of age-related disabling diseases is particularly high and currently immutable.

Some speak of this as trading off longer life for worsening health. The empirical evidence to date tends to favor the expansion of morbidity hypothesis, although additional data are required to fully test these hypotheses.

The prospect of continued reductions in old-age mortality has substantial policy implications. For example, recently completed population forecasts made by the Office of the Actuary indicate that the size of the U.S. population age 85 and older will increase from its current size of 3.5 million to about 15 million by the year 2050. This forecast is based on the middle-range assumption that period life expectancy at birth will increase to 79.8 years (from today's level of 75.4) by the middle of the next century. If life expectancy in the year 2050 is three years higher than the middle-range estimate, the size of the most frail segment of the population—the oldest old—would exceed 19.9 million.

Nursing home care currently costs over $31 billion for just over 1.3 million nursing home residents age 65 and older in the United States. By the year 2050, the number of nursing home residents will increase to between 5 and 7 million per-

Continued on next page

Demographer's Page

Continued from previous page

sons, costing some $100 to $160 billion (in constant 1985 dollars).[7] The range for these projections is based on high and medium-range forecasts of life expectancy for the U.S. population.

Life expectancy assumptions heavily influence estimates of total health-care expenditures, the number of people with disabling conditions such as osteoarthritis or Alzheimer's disease, and outlays for the Social Security system. If life expectancy at birth increased to 85 years by the middle of the next century, health-care costs associated with old age would skyrocket. Under the unlikely scenario that period life expectancy approached 100 years at any time in the next century, developed and developing countries would be faced with extreme financial hardship.

Currently, a lively debate is underway in the literature on the upper limits to human life. Advances in medical technology and the biology of aging are proceeding at a brisk pace, with major breakthroughs on the horizon. Yet, research is proceeding without a full discussion of the health and longevity consequences of success. We should define with greater precision the range and uncertainty associated with our short-term and long-term mortality forecasts, and choose with care the current and future direction of medical research and therapeutic interventions.

Note: This work was not funded through the Argonne National Laboratory.

1. Some researchers argue that there is no biological limit to life per se—only age-related physiological decrements for which intervention may eventually become possible.
2. Jacob S. Siegel and Cynthia M. Tauber, "Demographic Dimensions of an Aging Population," in *Our Aging Society* (New York: W. W. Norton & Co., 1986), pp. 79-110.
3. Jean Bourgeois-Pirchat, "Future Outlook for Mortality Decline in the World," *Population Bulletin of the United Nations* 11 (1978): 12.
4. James F. Fries, "The Compression of Morbidity: Near or Far?" *Milbank Quarterly* 67, no. 2 (1989): 208-231.
5. Kenneth G. Manton, Max A. Woodbury, and Eric Stallard, "Forecasts of the Theoretical Limits to Human Life Expectancy," (working paper, 1991).
6. S. Jay Olshansky, Bruce A. Carnes, and Christine Cassel, "In Search of Methuselah: Estimating the Upper Limits to Human Longevity," *Science* 250 (1990): 634-640.
7. Edward L. Schneider and Jack M. Guralnik, "The Aging of America: Impact on Health Care Costs," *Journal of the American Medical Association* 263, no. 17 (1990): 2335-2340.

Population Today/INTERCOM Enters 20th Year

"Notice something different on the masthead?" queried a box on page one of the August/September 1975 issue of *INTERCOM*, the international newsletter on population.

"That's right," it went on, "*INTERCOM* has become the official newsletter of the Population Reference Bureau, effective with this issue."

Inside, editor James D. Snyder explained that the New York-based Population Services International had launched *INTERCOM* three years before because "population/family planning professionals were in dire need of a timely, interesting, concisely edited newsletter to keep them in touch with what was happening around the world." He called its purchase by PRB "a marriage made in heaven."

Snyder stayed on as editor for a time. But with the April 1976 issue, PRB brought *INTERCOM* in-house. Phyllis Avedon became editor, serving for four years, with contributions from *Population Bulletin* editor Jean van der Tak, PRB's then-vice-president Leon Bouvier, and other staff. Art Haupt, who would serve as editor for a decade starting in January 1980, first appears on the masthead in June 1977 as assistant editor. The prolific Carl Haub is first cited as a demographic consultant in September 1979.

The name changed to *Population Today* in 1984. As the first issue under that name pointed out: "With the growing interest in population and 'demographics,' we felt it appropriate to have the title make the subject matter more apparent."

Lots to talk about. *Population Today's* predecessor was born as a newsletter of international population and family planning issues. But it soon took on a U.S. beat with a series of "bicentennial topics" such as "U.S. Women at Work," and "A Nation of Nations."

Over the years, the newsletter expanded its coverage as the content and controversies of population studies evolved. *Population Today* covered the dramatic shifts in U.S. policies toward international population assistance, and developments concerning such controversies as abortion law in the United States. It followed the aging of the baby boom, changes in U.S. family structure, the appearances of new contraceptive technology, U.S. poverty, the condition of U.S. minorities, findings from the World Fertility and Demographic Health Surveys, and the mushrooming AIDS epidemic. It took part in the rekindled debate on the effects of population growth on development and the environment.

The first Demographer's Page was "On Population Growth," by Leon Bouvier. Since then, the space has been used to explore many intriguing topics such as: how many countries there are; declining population growth among the Hutterites (the high-fertility religious sect); how to teach demographers; Vietnam's first census; China's one-child policy; the 1984 Olympic games; immigration; and the future of the U.S. black population.

Format changes. Over the years, the look of the newsletter has changed. In January 1986 *Population Today* got its current distinctive look featuring clearer typography, stronger graphics, and a new bright Crayola-box color every month. The adoption of desktop publishing technology gave greater editorial control.

A light touch. Demography, someone once remarked, is a life-and-death matter. Yet, PRB's newsletter over the years often used humor to make a point. Its pages have featured articles under the *nom de plume* of Demos P. Graphique, the Sherlock Holmes-like master of "forensic demography" and reports from the mythical continent of Populandia (see page 10). The first Addenda was a snapshot of a sign at the town limits of a western Maryland hamlet: "Claggetsville, Population 28 or 29." Perhaps the strangest-ever Addenda was on contraceptive dog food.

Over its next 20 years, we hope *Population Today* will continue to cover the serious business of population issues but never lose its light touch.

—Susan Kalish

Upcoming Conferences

- **UN Conference on Environment and Development (UNCED)**, June 1-12, 1992 in Rio de Janeiro. The countdown has begun for this major, worldwide conference on sustainable development. Two "conventions" are up for ratification, one on climate change and the other on biodiversity. Efforts to get population-environment linkages on the agenda resulted in a compromise that population issues will be discussed within each relevant topic.

Contact: UNCED Sub-secretariat, Department of Public Information, Room S-1040, United Nations, New York, NY 10017. Phone: 212-963-4295; Fax: 212-963-4556.

- **Population Association of America's Annual Conference**, April 30-May 2, 1992 in Denver. All demographic specialties and the latest work on a wide range of population issues will be featured.

Contact: Jen Suter, executive administrator, PAA, 1722 N Street, N.W., Washington, DC 20036. Phone 202-429-0891; Fax: 202-785-0146.

- **Census Bureau's Annual Research Conference, ARC 1991,** March 22-25, 1992 at the Holiday Inn Crowne Plaza in Arlington, VA.

Contact: Maxine Anderson-Brown, Office of the Director, Bureau of the Census, Washington, DC 20233; Phone: 301-763-1150.

- **Eighth International Conference on AIDS/STD Third World Congress,** Sponsored by Harvard University and the Dutch Foundation/AIDS Conference 1992. Cosponsored by the World Health Organization and the International AIDS Society.

Contact: Harvard AIDS Institute, 8th International Conference on AIDS, 8 Story Street, Cambridge, MA 02138. Phone: 617-495-0478, Fax: 617-495-2863.

- **Creating the 21st Century: Institutions and Social Change**, August 14-16, 1992, Anaheim Hilton Hotel and Towers, Anaheim, CA. Futurists will examine the changing roles and responsibilities of social institutions.

Contact: Susan Echard, conference staff director, World Future Society, 4916 Saint Elmo Avenue, Bethesda, MD 20814. Phone: 301-656-8274; Fax: 301-951-0394.

- **American Academy of Natural Family Planning,** July 15-18, 1992 in Wichita, KS. Send abstracts for papers by April 17.

Contact: C. Dennis O'Hare, M.D., Chairman, Science and Research Commitee, Twin Cities NFP Center; 2450 Riverside Avenue, Minneapolis, MN 55454.

POSITIONS/PROFESSIONALS

Rockefeller Foundation Re-Entry Support for African Scholars. This program is designed to assist in the professional re-establishment of talented African scholars who are returning from doctoral studies abroad and have interest in issues related to education revitalization and development in sub-Saharan Africa.

All proposals must include an explicit and substantial focus on female school participation as part of the set of educational issues to be examined. Award includes initial research support such as equipment, books, and supplies necessary to make use of techniques and knowledge acquired abroad. Proposals may be submitted prior to or within one year of returning to the scholar's Africa-based institution. Equipment purchased under this agreement becomes property of the institution.

Candidates must submit a project proposal that describes objectives, conceptual framework, the pertinent literature, research design and methodology, with time frame and detailed budget (not to exceed $25,000). Other requirements: 1) a letter from an African institution stating that the scholar will be a full-time staff member, and endorsing the research proposal; 2) two other letters of recommendation from academic supervisors at the institution where the applicant carried out doctoral study; 3) postgraduate transcripts; and 4) a resume. There are no deadlines for applications.

Contact: Scholars on Education Re-Entry Program, The Rockefeller Foundation, 1133 Avenue of the Americas, New York, NY 10036 or P.O. Box 47543, Nairobi, Kenya.

POPULATION UPDATE

Estimated United States Population:

As of October 1, 1991	253,366,000
As of October 1, 1990	251,184,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1080.

Estimated World Population:

As of January 1992	5,430,500,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet*.

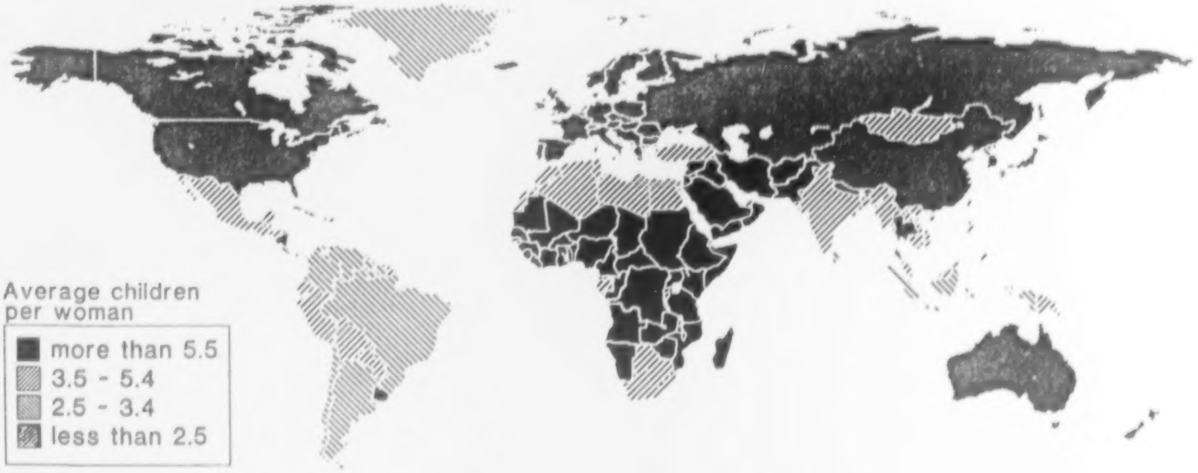
Latest Provisional Statistics for the U.S.: August1991

	12 months ending with August					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,108,000	4,132,000	16.3	16.5	16.1	15.9
Deaths	2,153,000	2,170,000	8.5	8.7	8.7	8.9
Natural increase	1,955,000	1,962,000	7.8	7.8	7.4	7.0
Marriages	2,407,000	2,447,000	9.5	9.8	9.7	9.7
Divorces	1,176,000	1,185,000	4.7	4.7	4.7	4.8
Infant deaths	37,200	38,500	9.0	9.3	9.8	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. *Monthly Vital Statistics Report* (vol. 40, no. 8) from the National Center for Health Statistics.

TAKE A NUMBER

Total Fertility Rate



Source: 1991 World Population Data Sheet, Population Reference Bureau

World Population Slide Show. A new set of 15 full-color slides of world maps showing population patterns is now available from PRB (black-and-white facsimile shown above). Slides illustrate rates of birth, death, natural increase, infant mortality, total fertility; life expectancy; population growth and "doubling time;" age structure; contraceptive use; government view of fertility level; GNP per capita; percent urban; and population density. Cost: $50 per set; $25 per set for members and educators.

ADDENDA

Populandia Patter

Where *did* the time go? Little Beverly Ming, the oldest citizen of Populandia, celebrated her 14th birthday on the first of this month.

Populandia is the mythical mini-continent that, starting January 1 of 1978, was declared by the World League of Countries (WLC) to be the repository of the world's natural increase (the excess of births over deaths). By one stroke this action concentrated population growth in one place, bringing the rest of the countries of the world to replacement level.

Populandia was first discovered in 1978 by the captain of the S.S. Interdependence as a huge volcanic eruption lifted it out of the Pacific Ocean. The continent's population grew to 73 million in its first year and now has 1,173,000,000 citizens—slightly larger than China today. Populandia now contains 21 percent of the world's population and is adding 259,000 citizens per day.

In a televised birthday interview, an exuberant Miss Ming shared with the world her wish to be an architect when she grows up. This ambition can hardly come as a surprise. All her childhood Beverly has been surrounded by colossal construction programs to keep ahead of her country's rapidly growing population. The world's busiest airport was still under construction when the jumbo jets began to arrive with their first tiny passengers. The well-staffed nurseries and well-baby clinics were barely set up and in operation.

Since then, Beverly and her cohort of 73 million have been the first to use the new child-care centers, high-rise elementary schools, and playgrounds constructed for the use of Populandia's citizens. With 13 percent of its population now in junior high school, Populandia has built about 99,600 schools (at 1,500 students per school) and faces the prospect of building and staffing 51,700 more this year.

Today, as WLC administrators make their decisions about course offerings and the quality of secondary education, they are casting the die for the characteristics of Populandia's future work force—and thus the kind of economy the verdant country will be able to support in the 21st century.

—Susan Kalish

CURRENT READINGS

POPULATION CHANGE IN CANADA: The Challenges of Policy Adaptation, by Roderic Beaujot. Toronto, Ontario: McClelland & Stewart Inc. 1991. 379 pp. ISBN: 0-7710-1158-X.

This book is a synthesis of the work of the Canadian Review of Demography and Its Implications for Economic and Social Policy, a project of Health and Welfare Canada. The review commissioned a number of studies on Canada's demographic past, present, and future. The summary report, *Charting Canada's Future*, mostly given over to graphic presentation, came out in 1989. Now, Roderic Beaujot summarizes information contained in the 167 other commissioned studies of the project. In this work of policy analysis, Beaujot reviews historical data, defines the choices involved, and clarifies the social tradeoffs to be made.

One controversial issue, the role of immigration and its resulting multiculturalism, has been much discussed in the Canadian media. Beaujot puts this issue into demographic perspective.

"Lower fertility has brought us to what some have called a 'demographic turning point' involving lower population growth and significant population aging," he explains. At the same time, people are living longer, which creates a larger social price tag for health care and a relative shortage of workers. To offset the process of population aging by means of childbirth, Beaujot points out, Canadian women would have to average four or five children—an unlikely scenario. For policymakers to adopt immigration as a "solution" to lower births, however, will require "adaptation" to multiculturalism on the part of Canadian society. A similar situation is being played out in all countries of the developed world, and is well explicated here for Canada.

—Susan Kalish

1990 Census of Population and Housing, Summary of Population and Housing Characteristics, 1990 CPH-1. U.S. Bureau of the Census. Washington, DC: GPO, 1991 (some reports available in 1992).

As of this writing, the PRB library has received most of the first printed volume from the 1990 census: separately bound reports for each state (minus the District of Columbia, Puerto Rico, and the Virgin Islands at this point). The reports contain summary data from the 100-percent sample (questions asked of every houshold) on population counts, age, sex, race, Hispanic origin, housing counts, household relationship, units in structure, value and rent, number of rooms, tenure, and vacancy characteristics. Data are reported for the state, local government units, and American Indian and Alaska Native areas. The 1990 printed census volumes are organized somewhat differently than they were for 1980 (when the first volume [PC80-1-A] contained information only on numbers of inhabitants, population density, and historical data on state population).

—Susan Kalish

BOOKS RECEIVED

Global Climate Change and Life on Earth, Richard L. Wyman, ed. New York: Routledge, Chapman & Hall, 1991. $24.95 paperback.

The Distribution of Welfare in Ghana, 1987-88, by Parl Glewee & Kwaku A. Twum-Baah. Washington, DC: World Bank, 1991. $7.95.

Consequences of Rapid Population Growth in Developing Countries, United Nations. New York: Taylor & Francis, 1991. $45.00.

World Tables 1991, World Bank. Baltimore: Johns Hopkins University Press, 1991. $34.95 paperback.

Does Undernutrition Respond to Income and Prices? Dominance Tests for Indonesia, by Martin Ravallion. Washington, DC: World Bank, 1991. $5.95.

The Real World: Understanding the Modern World Through the New Geography, Bruce Marshall, ed. Boston: Houghton Mifflin Co., 1991. $35.00.

Research with Hispanic Populations, by Gerardo Marín and Barbara VanOss Marín. Newbury Park, CA: Sage Publications, Inc., 1991. $13.95 paperback.

Maternal Nutrition and Pregnancy Outcomes, by Katherine Krasovec and Mary Ann Anderson, eds. Washington, DC: Pan American Health Organization. $24.00.

Consumer Power: How Americans Spend Their Money, by Margaret Ambry. Ithaca, NY: New Strategist Publications, 1991. $69.95.

Seasonality and Agriculture in the Developing World: A Problem of the Poor and Powerless, by Gerard J. Gill. New York: Cambridge University Press, 1991. $85.00 hardback.

The Household Survey as a Tool for Policy Change: Lessons from the Jamaican Survey of Living Conditions, by Margaret E. Grosh. Washington, DC: The World Bank, 1991. $5.95.

Disease and Mortality in Sub-Saharan Africa, by Richard G. Faechem and Dean T. Jamison, eds. New York: Oxford University Press for the World Bank, 1991. $49.95.

SPOTLIGHT

YUGOSLAVIA

Population: 23.9 million
Total area: 98,760 sq. mi.
Population density: 242/sq. mi.
Births per 1,000 pop.: 14
Deaths per 1,000 pop.: 9
Rate of natural increase: 0.5 percent
Total fertility rate: 1.9
Infant mortality rate: 24.3 per 1,000 live births
Life expectancy: 71
Capital: Belgrade

by Alex de Sherbinin

AUSTRIA
HUNGARY
ROMANIA
Belgrade
YUGOSLAVIA
Adriatic Sea
BULGARIA
ITALY
ALBANIA
GREECE

In a world increasingly rocked by ethnic conflict, the Socialist Federal Republic of Yugoslavia is sometimes seen as a harbinger of a possible new world order in which the nation-states of old fissure into tiny fiefdoms. Despite European community efforts to mediate, Yugoslavia appears to be on a path toward disintegration. At this writing, Croatia is under virtual occupation by Serbian forces, Slovenia is establishing its sovereignty, and ethnic Albanians have voted to establish Kosovo as a sovereign republic in a Yugoslav federation.

With a population the size of California and a land area equivalent to Wyoming, Yugoslavia is a country divided by ethnicity, language, religion, and levels of socioeconomic development. Ethnically, the two largest groups are Serbs (36 percent) and Croats (20 percent), followed by Bosnian Muslims, Slovenes, Albanians, Macedonians, Montenegrins and others (see *PT* November 1991, p. 2, for geographic distribution). There are almost as many linguistic divisions, and though Serbs and Croats share the same language (Serbo-Croatian) they are separated by different alphabets (Cyrillic among Serbs, Roman among Croats). With regard to religion, the majority Serb population is largely Eastern Orthodox, while Croats and Slovenes are mostly Roman Catholics. Bosnian Muslims make up approximately 9 percent of the population.

Superimposed on this volatile cultural mix is a history of violent ethnic conflict. Fighting between Croats and Serbs during World War II claimed 1 million lives, twice as many as were attributable to the Nazi occupiers. Today, Serbs accuse Croats of plotting genocide against the 600,000 Serbs residing in Croatia.

Ethnic tensions are exacerbated by regional disparities in economic development and living standards. The northern republics of Slovenia and Croatia have stronger, more industrialized economies. As with successionist regions in other countries, Slovenians and Croations feel that for too long they have buoyed the economies of their less industrious and resource-rich neighbors.

The differing levels of socioeconomic development are reflected in regional disparities in birth and infant mortality rates. The total fertility rate for Croatia is 1.14 average lifetime births per woman, compared to 4.12 in Kosovo in southern Serbia. In Kosovo, infant mortality is twice the national average and the population is growing at 2.3 percent per annum.

The family planning picture in Yugoslavia is mixed. The 1974 constitution states that "it is a human right to decide freely on childbirth." Yugoslavia has higher abortion rates than all of its East Bloc neighbors—approximately one abortion for every live birth. High abortion rates may be related to reliance on withdrawal as a birth-control method. Withdrawal accounts for over 60 percent of contraceptive use, followed by condoms (15 percent) and even lower levels for the pill and IUD.

Though Yugoslavia is splintering, so far there has not been the sort of large-scale refugee flow into neighboring countries which makes Western Europeans so apprehensive. Despite large scale internal dislocation, the Red Cross estimates that there are only 30,000 Croatian refugees in Hungary. Austria, on the other hand, has seen Yugoslav applications for political asylum quadruple to 50,000 in just five years.

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POPULATION TODAY

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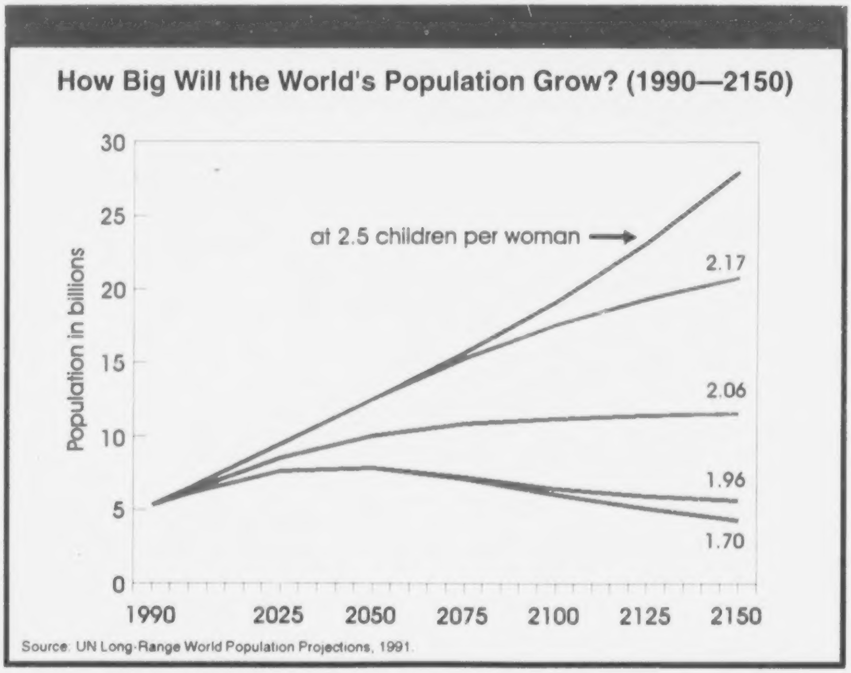

4 billion? 11 billion? 28 billion? UN projections show surprising results (see page 6).

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FROM THE EDITOR'S DESK

Risk and uncertainty. Sometimes the connections between two stories in an issue simply shout to be addressed. Such is the case in this issue with "Child Survival and the Demographic Trap" and the Demographer's Page, "UN Projections Show Uncertainty of Future World."

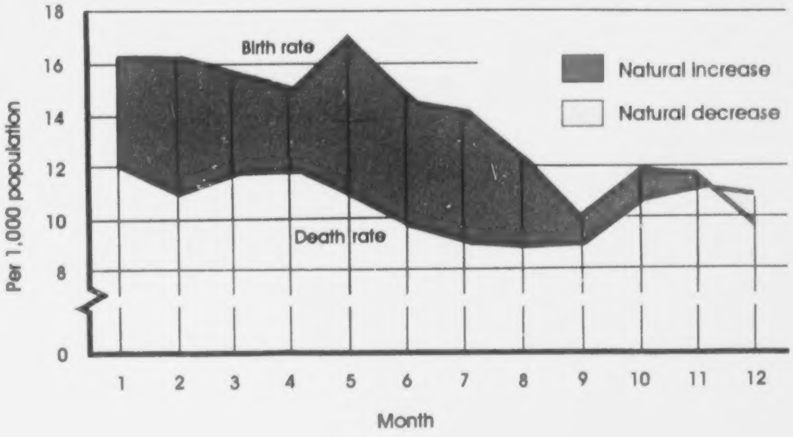
The first story reviews the controversy raised by Maurice King of the University of Leeds. Speaking from a perspective that might be characterized as ecological Malthusianism, King warns of the "demographic trap." In some developing countries, birth rates have remained high even as infant mortality has fallen, producing a population surge that could in some cases overwhelm carrying capacity, bringing ecological deterioration, drought, famine, forced migration, and higher mortality levels. In the second story, PRB's Carl Haub examines UN projections that show the incredible range of possible future world population sizes, depending on whether world fertility settles at slightly greater, or slightly less, than replacement level.

The new UN projections underscore the uncertainty of ultimate world population size. It is a general principle that uncertainty exaggerates risk. Common sense suggests that, in this case, we can most effectively reduce uncertainty about world population size by making vigorous efforts to provide the knowledge and means of family planning to people all around the world. Significantly enough, this seems to be the one point on which all contributors to the "demographic trap" debate seem to agree.

—*Susan Kalish*

SPEAKING GRAPHICALLY

Romania: Births Plummeted in 1990



Births fell dramatically in Romania after the January 1, 1990, repeal of the Ceausescu regime's near-total ban on contraception and abortion (see Take a Number, page 10). Month-by-month figures show that the birth rate dropped from just over 16 per 1,000 population in January to under 10 per 1,000 in December, changing natural increase to decrease.

Source: *Informatii Statistice Operative* no. 1 (February 1991), România-Comisia Natională Pentru Statistică.

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Contributing Editors: Kimberly Crews, Sasha Loffredo, John F. May
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Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728
(202) 483-1100

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Recycled Paper

The Late 1980s Baby Boomlet: Delayed Childbearing Or Not?

Emily Fraker

When U.S. fertility rose at the end of the 1980s for the first time since the end of the post-World War II baby boom, there was a good deal of speculation about what caused it. During the three-year period 1986-1989, the U.S. total fertility rate[1] (TFR) rose from 1.84 to 2.01 children per woman.

In 1989, births topped 4 million for the first time since 1964, drawing considerable press attention. One popular explanation has been *delayed childbearing*. According to this line of thought, more U.S. women are working in career-oriented jobs, are marrying later, and thereby put off having children until over age 30.

Before 1986, the TFR had remained pegged at 1.8 since the mid-1970s. One thing that drew attention to delayed childbearing was that the TFR would actually have fallen below 1.8 in the mid-1980s, had not birth rates for women in their 30s risen slowly. Birth rates for younger women continued to fall a bit during that period. So, there was a solid rationale for extending the delayed childbearing hypothesis to the late 1980s.

One problem that should have caused suspicion about the delayed childbearing theory was that the TFR rose by too great an amount from 1986 to 1989 for women over 30 to be the likely sole cause. Typically, women under age 30 account for the lion's share of childbearing, so that any significant increase in the TFR is likely to be largely due to that group. In fact, the age-specific rates for *all* age groups above 30 generally sum to less than the rate for the 25-29 age group alone. The under-30 group tends to account for about 70 percent of U.S. fertility.

More at every age

But the theory that delayed childbearing fueled the late-1980s baby boomlet could not be proved or disproved until birth rates by age of mother became available. The 1989 numbers, just released by the National Center for Health Statistics (NCHS), make it quite clear that delayed childbearing was not the major cause.

In 1986, the birth rate for women 25-29 was 109.2 births. By 1989, it had risen to 116.6, an increase of 7.4 per 1,000, (see table). Likewise, for women age 20-24, the birth rate rose from 108.0 to 115.4 per 1,000, a jump of 7.2. For women age 30-34, the rate went from 69.3 to 76.2, a rise of 6.9 per 1,000. So, although it is true that the rate increased by a higher percentage for the 30-34 group, it actually accounted for a lesser amount of the TFR increase.

In fact, birth rates for all three age groups below 30 increased by a larger amount than for women over 30. The TFR rose after 1986 because birth rates for *all* women increased, but particularly for those below 30. Childbearing over 30 has played a role, but it wasn't as significant as younger groups. Women under 30 accounted for about two-thirds of the 1986-1989 TFR rise.

Older mothers

Despite all of this, it is still true that women are having children at older average ages than they did in the past. In 1989, 29 percent of all births were to women over 30, compared with 20 percent in 1980, and 18 percent in 1970. In fact, from the mid-1970s low point of U.S. fertility, birth rates for women 30-

Changes In Age-Specific Fertility, 1986-1989

Age Group	1989 Births per 1,000 women	Increase Over 1986	Percent Change
15-19	58.1	7.5	14.8
20-24	115.4	7.2	6.7
25-29	116.6	7.4	6.8
30-34	76.2	6.9	10.0
35-39	29.7	5.4	22.2
40-44	5.2	1.1	26.8

PRB calculations based on data from National Center for Health Statistics, "Advance Report of Final Natality Statistics, 1989. Monthly Vital Statistics Report 40(8S), December 12, 1991.

Continued on next page

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[1] The total fertility rate is the average number of children a woman would have in her lifetime if the rate of childbearing of a particular year were to remain constant.

Late 1980s Boomlet
Continued from previous page

34 rose by a good deal more than for other groups. In 1976, the rate for 30-34 year-olds was 53.6 per 1,000 and rose, as we have seen, to 76.2 by 1989—a whopping 40 percent. During the same period, birth rates for the 25-29 group only rose from 106.2 to 116.6.

U.S. fertility, in fact, has been undergoing a number of complex changes. In 1970, the TFR was a lofty 2.5 children per woman. By the bicentennial year of 1976, it had fallen to 1.7—a huge drop. After that, very slow increases in over-30 birth rates helped keep the TFR at about 1.8, while rates for younger women remained flat. Then, in the late 1980s, the TFR rose unexpectedly. Based upon preliminary data for 1990, it probably rose to 2.1, or replacement level.

Overall fertility has dropped, stabilized, and then risen while age patterns have changed simultaneously. Because of this complexity, one can find support for any number of contradictory interpretations. Take, for example, the following statement: "U.S. women age 30-34 are no more likely to have children today than they were in 1970." We can support this assertion by comparing the rates for the 30-34 group in those years: 73.3 in 1970 to 76.2 in 1989. Not much change there. Or, we can argue against it by pointing out that, since *overall* fertility has dropped since 1970, the 30-34 age group, which maintained a stable rate, accounts for a larger *share* of U.S. childbearing today. The answer really depends upon which question one is asking.

What of the future? The *number* of births is likely to decrease as smaller groups of baby- bust women enter their childbearing ages. In 1990, the age group 15-19 was almost one-fifth smaller than the age group 25-29. Barring further rises in the birth *rate*, total births will go down.

What about the birth rate? In 1991, the U.S. birth rate stopped rising and even fell a bit below that of 1990. No one knows why, although speculation centers on the possible effects of the national recession.

Perhaps the only thing we can say about the U.S. birth rate is that it will keep us guessing.

—Carl Haub

SURVEY REPORT
Belize

Prior to the 1991 Belize Family Health Survey, detailed fertility information was scarce for this small Central American nation of 189,000. Demographers interested in Belize (called British Honduras until 1973) relied on limited or general data to estimate demographic indicators such as the TFR (total fertility rate, or average lifetime births per woman) and CPR (contraceptive prevalence rate). As a result, estimates varied widely. During the period 1986-1990, TFR estimates ranged from 4.0 to 5.0 and CPR from 37 to 44 percent.

The 1991 survey, which is similar in format to the Demographic and Health Surveys (DHS), collected information from more than 2,500 households. The preliminary report analyzes four of six objectives set forth by agencies sponsoring the survey: national-level fertility estimates; duration of breastfeeding; knowledge, use, and source of contraceptives; and levels of women at risk of unplanned pregnancies.

Survey results indicate a TFR of 4.5, falling right in the middle of the range of predictions. The report provides fertility rates by several characteristics, such as age, education, work status, urban/rural residence, and language spoken in the household. The rate of teenage childbearing, at 136 births per 1,000 women age 15-19, is at the high end of the scale of adolescent fertility rates in Central America.

The overall knowledge of family planning is high; 95 percent of those interviewed knew of at least one contraceptive method. As expected, more educated women are more likely to know about family planning. Yet, contraceptive prevalence is lower than would be expected given the high awareness level. Less than half (46.7 percent) of married women age 15-44 are currently using any method of family planning; only 41.7 percent use a modern method. These rates are lower than for many neighboring countries, such as Costa Rica, Panama, and Mexico. The rate for the developing world as a whole is over 50 percent.

Around the world, voluntary female sterilization has become the most common family planning method, generally used by women who have completed their desired family size but are still of reproductive age. In Belize, female sterilization is the predominant contraceptive method, accounting for 40 percent of current users. Oral contraceptives are the next most widely used method, serving another 32 percent of users. In Belize, the government provides the majority of sterilization services, while family planning associations and pharmacies supply other methods of contraception.

The survey results indicate that more than 40 percent of women not using contraceptives are candidates for family planning services (that is, their reasons did not include lack of sexual activity, pregnancy, or inability to conceive). In addition, more than half of the non-users claim they desire to practice family planning and most knew where to obtain a method.

Once the final report is released, Belize health professionals hope to have accurate national-level information on other aspects of family health such as infant and child mortality, morbidity, and immunization rates in order to evaluate the current status of health programs and target specific populations in need of family planning and maternal and child health services.

1991 Belize Family Health Survey, Belize Family Life Association and Belize Ministry of Health. Reprinted by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Atlanta, Georgia 30033.

—Sasha Loffredo

Census Taking in Niue, South Pacific

Alofi Harbor: Since the count was *de facto*, we could include the travelers.

The census conducted in China in July 1990 was the largest enumeration ever to take place in human history. It gave a total head count of 1,133,682,501 (see *PT*, January 1991, p. 3).

The *smallest* census enumerations might well be those that take place every five years or so on the Polynesian island of Niue (area: 260 sq. km.; population: 2,267 as of October 1, 1989).

The censuses of Niue employ extraordinarily sophisticated modern methods. Generally two forms are used: one for each household, and one for each individual. Enumeration follows a *de facto* rule, so everyone on the island at census time (precisely midnight of census day) is counted. Census schedules contain a large array of questions but, given the size of the population, can easily be processed with a microcomputer. Census data are processed, analyzed, and published in Niue, often with technical assistance from the South Pacific Commission (SPC) in Nouméa, New Caledonia. Niue's census enumerations are believed to be complete, usually matching results yielded by the civil-registration system.

During the 1981 Census of Niue, which I helped conduct as a United Nations demographer based at the SPC, I remember working with my Niuean colleagues on enumerators' and supervisors' manuals, census block maps, coding sheets, tabulation schedules, training sessions for enumerators and supervisors, and enumeration field work. An American computer specialist was to process the census on a single Apple II which he had brought along.

The census commissioner, Mr. Sol Kalauni, told me right away that his prime concern was to count at least 3,000 people on the island, so that the government would continue to qualify for certain levels of assistance from New Zealand (Niue has a free association status with this country). Although the total South Pacific population is currently increasing at the rate of 1.2 percent per year, some island-states have seen their populations decrease sharply as many Pacific islanders emigrate to Australia, New Zealand, and the United States. Incidentally, at that time the total population of the South Pacific region (less Australia and New Zealand) was about 5 million—roughly equivalent to the number of *enumerators* in the 1982 census of China.

This constant concern with the number of Niueans is best illustrated by an episode which took place during the 1981 census. A French sailing boat happened to anchor offshore in Alofi harbor the day before the census. Since the boat was within Niuean territorial limits and the enumeration was *de facto*, we could include the travelers!

I was the only French-speaker on the island. My suggestion to paddle on a canoe to go enumerate the boat was met with enthusiasm. This would definitely add a few persons to the total count as we were still afraid to end up with fewer than 3,000 people. So, I went to visit the boat and enumerated four persons. The boat was considered a household (one household form), with 3 males and 1 female (four individual forms), all French citizens, but listed as resident aliens.

Another unique feature of the census was the peculiar method used to correct the enumeration forms. Instead of going back to the field to check the questionnaires, each problem (for example, inconsistencies among responses) was submitted to the census commissioner who normally was able to correct the form at once for he knew personally everybody on the island. A couple of times, however, he had to call some respondents on the telephone. No need here for imputation.

The evening before the census date (midnight of September 28), the young French woman from the sailing boat decided to jump ship after a quarrel with her boyfriend. She spent the census night at a government guest house. Next morning, I went to see the census commissioner to tell him about this migratory movement. Some corrections were needed on the census forms. Mr. Kalauni looked at me with a smile. A true professional, he had already made all the necessary changes. Everyone on the island was quite aware of what happened the previous night on the boat! Data quality is best achieved in small populations.

My mission to Niue was successful in Mr. Kalauni's terms. The total count of the 1981 census was 3,281 people, although this represented only half the number who lived permanently in New Zealand (mostly in Auckland) at that time. It was also a fascinating opportunity to follow a complex census operation from A to Z, not to mention the fond memories of a unique place on Earth.

—John F. May

John F. May, a demographer with The Futures Group, in Washington, D.C., is a Visiting Scholar at PRB.

DEMOGRAPHER'S PAGE

New UN Projections Show Uncertainty of Future World

by Carl Haub

How large will world population grow to be? For those involved in development issues, food production, the environment, and many other fields, that is the "$64,000 question."

Despite an overall—albeit very slow and at times halting—decrease in the world population growth rate (from 2.0 percent in the late 1960s to about 1.75 today), billions of people have been added and in record time. Totaling 3 billion in 1960, world population swiftly expanded to 5 billion by 1987 and stands at over 5.4 billion just five years later.

Yet, during the past decade, world population has receded as an issue in many minds. This may result from falling birth rates in many developing countries and fertility low enough to portend population decrease in most developed countries. True enough, but is such complacency warranted? The new United Nations population projections clearly show that it is not.

The 1990 "extensions" (as the projections are now called) show seven divergent long-range scenarios, yielding world population totals by the year 2150 from 4 billion to 694 billion (the latter if current growth rates remained unchanged). In a major departure from past practice, only one of the seven extensions assume that world population will reach a stationary replacement level within the next century.

The United Nations Population Division publishes a well-known series of world population projections every two years, the last being the 1990 revision. These biennial projections, however, end in the year 2025, so that long-range implications are not apparent. Periodically, the UN Population Division extends the series to the end of the next century, providing a look at future stationary population size. The last such series was published a decade ago, and was based on the 1980 revision.[1] The division's recently released *Long-range World Population Projections: Two Centuries of Population Growth, 1950-2150* incorporates an updated knowledge base, including the latest census counts and new insights on fertility trends from programs such as the Demographic and Health Survey.

The UN projections are particularly important since they form the basis for many scenarios of the future that are likely to be found elsewhere. Other UN specialized agencies, for example, use them as denominators for projecting per capita economic indicators: the UN Food and Agriculture Organization for food production projections; the International Labour Organization for labor force; and the list goes on.

Beyond Replacement

In making world population projections, demographers typically make several overriding assumptions about future birth rates: first, birth rates will fall in every high-fertility country; second, they will fall to and stabilize at the "replacement level." Replacement fertility is achieved when couples average two children each, just "replacing" themselves as they leave the reproductive phase of life. Replacement level is generally considered to be equal to a total fertility rate (TFR) of 2.1 lifetime children per woman. (The ".1" compensates for the fact that not all women live to or through their childbearing years; those who survive must produce a little "extra" fertility.)[2]

In past long-range projections, the UN and others have assumed that all countries would arrive at replacement fertility—whether their birth rate needed to fall or rise to get there. The UN's most widely-used 1980 scenarios—the high, middle, and low—differed only by when, not if, the world would reach replacement level.

The UN's 1990 extensions, by contrast, contain seven scenarios: medium, high, medium-high, medium-low, low, "instant replacement," and constant fertility (see table). In a departure from past practice, only the medium series assumes permanent replacement. The medium-high series assumes that world fertility will settle on a value 5 percent *above* replacement level; the medium-low series assumes 5 percent *below* it. This seemingly subtle distinction makes a big difference in the longer-term outcomes—20.8 billion compared with 5.6 billion by 2150. For the 1980 series, the high, medium, and low variants assumed that once replacement level fertility was reached, it would be unwaveringly maintained by all countries. The only real justification for such an assumption is that it is statistically convenient.

The 1980 long-range projections did include nonreplacement-level sets of projections, called the growth and decline variants. Most users, however, ignored them and limited their attention to the high, medium, and low variants. Primarily, they used the medium variant—treating it almost as if it were the only UN projection. In some cases, analysts placed too much significance on small deviations from the medium series. It was often noted that "the UN projections are up (or down)" even when the significance of that fact was marginal at best.

When restricted to the use of the 1980 high, medium, and low variants, the range of future world population size has been most often quoted as 8 to 14 billion, thereby establishing a sort of theoretical set of outside limits of possibility. The new extensions shake us rudely from such complacency and show us how little we really know of the future.

The results of each projection, along with fertility assumptions, are shown in the table. First, let us look at the admittedly unlikely scenario of constant fertility at today's levels, which shows where

Carl Haub is a demographer and director of
Information and Education at the
Population Reference Bureau

United Nations Long-Range Projections: 1980 and 1990 Assessments

Year	1980 Medium	1990						
		Medium	High	Medium-High	Medium-Low	Low	"Instant Replacement"	Constant Fertility
1990	5,292	5,292	5,327	5,327	5,262	5,262	5,292	5,311
2000	6,261	6,261	6,420	6,420	6,093	6,093	5,792	6,463
2025	8,195	8,504	9,444	9,444	7,591	7,591	7,069	10,978
2050	9,513	10,019	12,506	15,328	7,817	7,813	7,697	21,161
2100	10,185	11,186	19,156	17,592	6,415	6,009	8,087	109,405
2150	10,139	11,543	28,025	20,772	5,633	4,299	8,351	694,213
Ultimate TFR	2.07	2.06	2.50	2.17	1.96	1.70	NA	NA

Source: United Nations, *Long-Range World Population Projections: Two Centuries of Population Growth, 1950-2150* (New York: UN, 1991).

population growth would be headed "if present trends continue." If fertility remained constant at today's level, the world population would reach 694 billion by 2150! And, although country-level fertility remains constant, the world level actually rises (from a TFR of 4.3 in 2025 to 5.7 in 2150) since the population share of the high fertility developing countries increases. Granted, the results of this projection border on the absurd, but it might be a good idea to pin the constant series on the wall just to be reminded of the growth potential of world population. In another "what if" scenario, the "instant-replacement" extension assumes that replacement was reached two years ago in 1990, leading to an ultimate population size of around 8 billion.

A Murky View

The medium series ("the most likely scenario" as we mistakenly tend to call it) shows an ultimate world population size of 11.5 billion. This series shows the world's regions reaching replacement on a schedule built on assumptions reflecting the regions' current birth rates, population policies, socioeconomic situation, and other factors. It is assumed that developing countries will see their birth rate decline as they develop and urbanize, following the experience of today's industrialized nations. The exact date of reaching replacement varies from 2100-2105 for most developed countries, who usually must rise to reach it, to 2045-2050 for Africa and Latin America. China is projected to return to replacement by 2100-2105, after falling to 1.8 in 2025.

Interestingly, the groupings "more developed countries" (MDCs) and "less developed countries" (LDCs) are not used in the new publication, replaced by the terms "Group I" and "Group II," which reflect region as much as stage of development (although the new categories correspond closely with previous ones). As it happens, the long-range projections were performed at the regional level, not country, making re-aggregation into MDCs and LDCs difficult. Arguably, extending today's distinction between "developing" and "developed" countries over 150 years from now is inappropriate.

The medium extension of ultimate population size is over 1 billion higher than the 1980 projection. Part of the reason is that higher life expectancies were assumed. Some analysts have seen past assumptions as too conservative and most recent projections have raised future life expectancy, in part because some countries have already exceeded them. Thus, in the 1990 UN projections, male life expectancy at birth is assumed to rise to 82.5 years (way up from the previous assumption of 73.5) and female to 87.5 years (it had been only 80.0). A similar series of projections from the World Bank uses even higher assumptions.[3]

This series departs most dramatically from earlier versions in that these projections do not assume replacement-level fertility in what once were called the high and low variants. As discussed earlier, the medium-high and medium-low fertility extensions assume only a 5 percent variation either way from replacement. Nevertheless, the results by 2150 are very different indeed: 20.8 billion (and still growing) versus 5.6 billion (and slowly declining). Two *very* different results from small differences in the underlying assumptions.

So, there you have it. A reminder once again that our knowledge of future world population is murky indeed. While we make tidy statistical assumptions about the world's countries, the coming reality will likely be a mix of many demographic futures, all summing to some unknown world total. Looking at the UN's new projections for the year 2000, little difference can be seen among the seven scenarios. However, 2150 is quite a different story.

Notes:

1. United Nations Population Division, "Long-Range Global Population Projections, As Assessed in 1980," *Population Bulletin of the United Nations* No. 14, 1983: 16-30.
2. A TFR of 2.1 represents replacement level only for countries with low mortality (high life expectancy at birth). Countries with lower life expectancy—between 50 and 70 years—can reach replacement with TFRs anywhere from 2.2 to nearly 3.0. The assumption is, however, that birth and death rates will fall roughly together.
3. *World Bank Projections, 1990-1991* are currently available as working papers, but are normally published in hardbound form by the Johns Hopkins University Press. The World Bank produces only one series, but makes long-range projections for individual countries. The UN only projects regions.

Child Survival and the Demographic "Trap"

Is it responsible to improve the survival rates of children in less developed countries without also making vigorous family planning efforts?

This is the question posed to the world-health community by Maurice King, a professor of Public Health at the University of Leeds, England. King raised the issue in the prestigious British medical journal, *The Lancet* (September 15, 1990) and in 1991, in the journal *NU (Nytt om U-landshälsovård)*, published by the International Child Health Unit of Uppsala University, Sweden. Halfdan Mahler of IPPF, Richard Jolly of UNICEF, and other experts concerned with child health contributed opposing viewpoints to *NU*.

The debate, encouraged by a supportive *Lancet* editorial when King's original article appeared, still continues in that journal, with a January 4 letter to the editor on "unsustainable population growth" in Yemen. And, UNICEF's just-released annual report, *The State of the World's Children 1992*, for the first time contains an impassioned plea for family planning.

The crux of King's argument is that in some areas of the developing world, notably sub-Saharan Africa, population growth has begun to progressively undermine the "carrying capacity" of available resources, with serious implications for ecology and health.

Transition or Trap?

King refers to the demographic transition theory—which demographers use to summarize what happens to birth and death rates as countries modernize. In the first stage, prior to advances in public sanitation and medicine, high death rates, especially for infants and children, are balanced by high birth rates, so that population growth is minimal. During the second stage, as living conditions and medical technology improve, death rates fall. Birth rates, however, remain high, causing the population to mushroom.

In the third stage, couples begin actively to limit the numbers of children they have, responding to a combination of rising education levels and living standards, the incentives built into a wage economy, changing roles of women, and the sense that, with more children surviving, they can afford to have fewer births. Information about and access to modern contraceptives help translate new attitudes into sometimes dramatic changes in reproductive behavior. At this stage, the population eventually stabilizes again, with new, lower, rates of births and deaths.

Demographers consider areas such as Europe, North America, and Asian countries such as Japan, Hong Kong, and Korea—where most women have two or fewer children in their lifetimes—to have reached the third stage of the transition. Falling family size in South America, with the TFR (total fertility rate, or average lifetime births per woman) at 3.5, suggest the demographic transition is already underway. The TFR for Africa remains a high 6.1—but death rates have fallen, and the theory predicts that fertility rates will eventually follow.

Ethics or Ecology?

King, however, argues that for some countries, time has run out for a transition. Instead they are falling into a "demographic trap." In this trap (a term borrowed from the neo-Malthusian literature on population and economic development), overpopulation will "destroy the biological support system and cause ecological collapse." In Ethiopia, King believes, such a collapse has already produced "ecological refugees." He speculates that reported recent slowdowns in the decline of infant mortality in several developing countries and rises in others may be a sign of the process beginning.

King challenged the World Health Organization to introduce the concept of sustainability into its official definition of health, which would then read: "Health is a *sustainable* state of complete physical, mental, and social well-being, and not merely the absence of disease and infirmity." In a follow-up letter to *The Lancet,* King said that drawing attention to the need to sustain the ecological foundations of health was the "central suggestion" of his article.

Most controversial, King questioned the ethics of providing child survival programs under "trap" conditions. In particular, King criticized UNICEF for "having insisted...that reducing the death rate always reduces the birth rate." He advised UNICEF to "promote sustainability as the impetus to drive [rigorous] family planning programmes in all communities in danger of the trap."

In his replies in *The Lancet* and *NU*, UNICEF's Jolly denied that charge. UNICEF, he said, has long promoted child survival within the larger context of population-growth issues and "plays a major role" in "logistics, training of family planning providers and advocacy and education about birth spacing and family planning." Nevertheless, family planning remains primarily the responsibility of another UN agency, the United Nations Population Fund (UNFPA).

In May 1990, WHO, UNICEF and UNFPA signed a joint statement of common goals, which, in part, called for "access by all couples, especially women, to family planning information and services."

In *NU*, Jolly wrote, "UNICEF's major annual publication, *The State of the World's Children Report,* has had a section on population issues and family planning in every single issue over the last ten years." Until quite recently, however, UNICEF does seem to have had some difficulty making eye contact with family planning issues.

The *1984 State of the World's Children* report linked child survival to the goal of "slowing population growth"—but through the argument that "child survival lowers the birth rates." From a similar perspective, the 1988 report stated that "preventing births that come 'too many, too close, too young, too old,' can do more to improve mother and child health than almost any other single intervention" and advocated birth spacing to save the lives of mothers and children. Also in 1988, UNICEF's report for the first time contained data on contraceptive prevalence rates and population growth. The 1991 report fea-

Continued on next page

Child Survival

Continued from previous page

tured a section entitled "Child survival and population growth," but again stated that "[d]oing what can now be done to reduce child deaths in the developing world would also help to slow population growth."

UNICEF's 1992 report, however, is a real departure. Although supportive of family planning in the past, here the agency strongly advocates birth planning, giving it a heightened moral and tactical importance. The "failure to realize the potential" of family planning, says the report, is "one of the greatest mistakes of our times." Meeting the "vast unmet demand for the knowledge and means of family planning" would reduce maternal disability and death, prevent many illegal abortions, save children's lives, and improve the life chances of women and children, as well as slow population growth. In addition, "such is the range of methods now available...that family planning can be promoted and practiced in ways which are sensitive to the religious and cultural contours of almost all societies."

However, another section of the 1992 report, "Fewer deaths, fewer births," takes up the child survival argument, stating: "reducing child deaths is one of the most powerful of the forces which make up the reins of population growth."

Although updated with ecological terminology, King's critique raises basically the same questions as did Thomas Malthus, in his famous *Essay on Population* two centuries ago: Will population increase outstrip growth in food production? If so, can efforts at redistribution of resources accomplish more social benefit, in the long run, than neglect?

In a moving rebuttal in *NU,* Halfdan Mahler ponders whether "'solutions' of such an outrageous nature"—[that is, neglect of "sick and starving children"]—"should perhaps not even be floated as a provocation to an amoral world? The ethical stakes are just too high."

But, it is unlikely that this debate, already 200 years old, will ever be entirely resolved. It reflects ethical and moral dilemmas in the population field that require both thought and sensitivity.

—*Susan Kalish*

POPULATION UPDATE

Estimated United States Population:

As of November 1, 1991	253,610,000
As of November 1, 1990	250,969,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports,* P-25, no. 1081.

Estimated World Population:

As of February 1992	5,438,000,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: September 1991

	12 months ending with September					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,135,000	4,146,000	16.4	16.6	16.1	15.9
Deaths	2,149,000	2,174,000	8.5	8.7	8.7	8.9
Natural increase	1,986,000	1,972,000	7.9	7.9	7.4	7.0
Marriages	2,387,000	2,452,000	9.4	9.8	9.7	9.7
Divorces	1,180,000	1,190,000	4.7	4.8	4.7	4.8
Infant deaths	37,000	38,500	9.0	9.3	9.8	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report,* vol. 40, no. 9 (1992).
Correction: In the January 1992 issue of PT, the October 1990 U.S. population was stated incorrectly. The October population was actually 250,726,000.

Announcing: The Challenge of World Heath

Enormous changes have altered the world-health picture. Since 1950s, world life expectancy rose from about 47 to 64 years. Still, more than 300 million people live in two dozen nations where average life expectancy is less than 50, and one in ten infants die before age one. A new PRB study updates the major issues in world health showing dramatic differences between developed and developing countries and assessing factors driving future changes.

Some emerging issues:

- **Disability.** Analysts are increasingly measuring the consequences of disease not only in number of deaths, but also in the toll exacted in the quality of life by disease-caused disability.
- **Lifestyle.** The greatest health gains in coming years in the developed world are expected to come from the promotion of healthier lifestyles. Smoking, alcohol and drug use and pollution are the greatest killers and disabler.
- **Who gets sick?** Heart disease, high blood pressure, and cancer—sometimes called "diseases of affluence" since they are the leading causes of death in rich countries—actually afflict the poor more than the better-off residents of developed countries.
- **The cost of improving health.** Better health does not have to carry a high price tag. Some relatively poor countries have made remarkable health advances. Six countries with per capita gross national products of less than $2,000 have achieved life expectancies of 70 years or greater.

The Challenge of World Health, by W. Henry Mosley and Peter Cowley, *Population Bulletin* 46, no. 4 is available from the Population Reference Bureau, 1875 Connecticut Avenue, N.W., Suite 520, Washington, DC 20009-5728 (1-800-877-9881). Price: $8 per single copy, discounts for multiple copies.

The Reader's File

Family Planning World, which made its debut this fall, covers the major news stories of the population field in an accessible, journalistic manner, using *USA Today*-type color and graphics. James D. Snyder, editorial director, is an old population hand who in the early 1970s founded *INTERCOM,* which was later purchased by PRB and became the precursor to *Population Today* (see *PT*, January 1992). Enterprise Communications International, Snyder's firm, publishes the 32-page, tabloid-size bimonthly with funds from DKT International, whose president, Philip Harvey, also heads Population Services International. These two nonprofit organizations engage in social marketing of family planning products and services.

"The family planning professional is "pretty well served on the technical side" Harvey told *PT*, but needed a "good source of news and in-depth reporting."

Family Planning World, Enterprise Communications, 1165 Northchase Pkwy., Suite 303, Marietta, GA 30067, $29/year (special introductory offer, $19/year). For editorial matters contact: John M. DiCongsiglio, editor, 1483 Chain Bridge Road, Suite 202, McLean, VA 22101, 703-448-0322.

New research and the safer copper IUD have renewed interest in this venerable device, among the most effective of reversible contraceptives. Research that linked IUDs and potentially fatal pelvic infections discouraged U.S. use, although many countries continue to use it. Now it is thought that only women who are at high risk for sexually transmitted diseases should avoid the device.

The Population Council and *Contraception* will sponsor a March 27-28 Conference in New York City, "A New Look at IUDs—Advancing Contraceptive Choices, A Balance Sheet of Risks and Benefits."

See "Special Section on IUDs," *Family Health International Network*, vol. 12, no. 2. For conference information contact: Susan Patterson, Butterworth-Heinemann, 80 Montvale Avenue, Stoneham, MA 02180. Phone: 617-438-8464, ext. 234 or 303; FAX: 617-729-4851.

TAKE A NUMBER

How we'll list the former Soviet republics. Users of PRB's *World Population Data Sheet* may already suspect some changes will occur in treatments of countries and regions in the 1992 edition. At this point, we plan to list the eleven member republics of the Commonwealth of Independent States (CIS) as independent countries in a "super-region" (much as we treated the former USSR on previous data sheets). The Republic of Georgia, if it remains outside the CIS, will be placed in Western Asia. Georgia, after all, lies in Caucasia, is contiguous to Turkey, and, well, we have to put it *somewhere.*

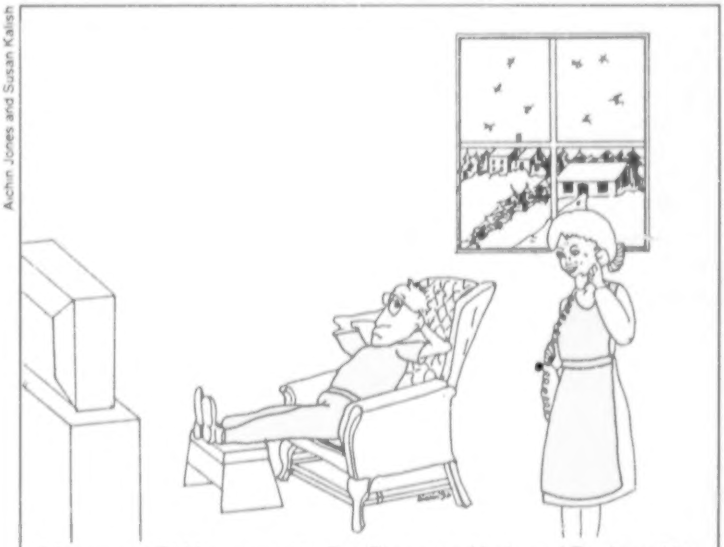
The three Baltic republics, Estonia, Latvia, and Lithuania, gained their independence in 1991 and will be listed as part of Northern Europe. We're unsure how to treat Yugoslavia, just yet. Slovenia appears to have separated, at least on a *de facto* basis; the European Community recognized Croatia and Serbia on January 15th.

Further changes: the 1992 *World Data Sheet* will include the Marshall Islands, Northern Marianas, and Micronesia, which have joined the United Nations (our policy is to show all UN members, regardless of size).

Fertility in Sweden and Romania. Sweden caught many by surprise when its total fertility rate rose from 1.6 lifetime children per woman in 1983 to 2.1 in 1990. But it looks as if the rise may have topped out in 1991, based on monthly rates through mid-1991. In Romania (see Speaking Graphically, p. 2), there were 314,700 births and 992,300 abortions in 1990, according to data obtained by Henry David of the Transnational Family Institute. This follows legalization of abortion on January 1, 1990. During 1990, the maternal mortality rate dropped by half—to 83 maternal deaths per 100,000 live births—still very high. The rate for maternal deaths due to abortion also fell—from 147 to 57 during 1990.

—Carl Haub

ADDENDA


Aichin Jones and Susan Kalish

"Manny and Shirley moved to San Diego, and Lois and Fred went to Daytona Beach. But me and Harry are just aging in place."

CURRENT READINGS

KENYA AT THE DEMOGRAPHIC TURNING POINT? Hypotheses and a Proposed Research Agenda, by Allen C. Kelley and Charles E. Nobbe, World Bank Discussion Paper 107, Washington, DC: The World Bank, 1990. 114 pages. $7.95. ISBN: 0-8213-1692-3.

Fertility declines have been documented recently in some sub-Saharan countries, most notably in Kenya, Zimbabwe, and Botswana. However, some researchers still doubt that the fertility transition has started in earnest in the region and, more importantly, they cannot agree on the factors that may trigger the onset of fertility decline. Considering the need for better explanations of fertility decline and the weakness of available policy frameworks to tackle the enormous challenges posed to development by rapidly growing populations, this essay by Kelley and Nobbe is both timely and useful.

Indeed, Kenya's persistently high fertility levels have puzzled both population specialists and policymakers. A significant decline in Kenya's fertility was deemed mostly unlikely, or very remote at best, despite huge and costly programmatic efforts. What, then has made Kenyan fertility start to decline from a total fertility rate (TFR, or average lifetime births) of more than 8 children per woman to a TFR of 6.7 as assessed in the latest Demographic and Health Survey conducted in 1989? The authors contend that it is the dramatic rise in costs of education.

Universal primary-school enrollment has virtually been achieved in Kenya and education costs have increased tremendously (parents do not pay tuition fees *per se*, but share many other costs through various types of "levies" and expenses). The authors single out this factor as the major cause for fertility decline among many other potential candidates, such as changes in the political environment toward family planning, better family planning services, the drought of 1984, the AIDS epidemic, and infant- and child-mortality declines.

The authors thoroughly discuss the hypotheses and test them statistically with the (limited) available data. In the process, they make specific recommendations and indicate new policy avenues. They also point to many research gaps. What makes their essay most interesting is the large perspective they offer. Family planning services, although crucial, do not work in a vacuum but are synergetic with other factors such as the building of a reliable health system and, more importantly, the emergence (and possibly the creation) of a demand for smaller family size. These lessons are essential for other sub-Saharan countries and donors alike which are trying to bring about fertility declines in this region in the near future.

—John F. May

THE REAL WORLD: Understanding the Modern World Through the New Geography, edited by Bruce Marshall. London: Marshall Editions Developments Limited, 1991. 264 pages. $35.00 hardback. ISBN 0-395-52450-4.

From beginning to end, *The Real World* demonstrates how geography plays a crucial role in every part of our lives. With excellent illustrations and photographs from artists all over the world, it provides a cogent series of topical discussions that provide the reader with insights into human behavior—past, present, and future. "Humans Emergent," documents the expansion of the human population until the industrial revolution. Another section, "Globe Inc." brings the reader through the revolution to our current global economy, exploring the consequences of a global marketplace. Captivating titles range from "The Global Assembly Line," which discusses automobile production, to "Caffeine—Or Cocaine?" and "The Tropical Chain-Saw Massacre." The section on settlement explains the growth of the world's largest cities, giving in-depth information on the importance of location in terms of trade, access to resources, and prospects for growth.

To frame this ambitious exploration of human-human and human-earth interaction, the editors begin with a discussion of the physical earth and end by showing the world through maps. In between they provide an abundance of innovative maps, colorful graphs, and engrossing photos matched with engaging text, which indeed connect the reader to *The Real World.*

—Kimberly Crews

Books Received

China's Strategic Demographic Initiative, by H. Yuan Tien. New York: Praeger Publishers, 1991. $47.95.

Patterns of Aging in Thailand and Côte d'Ivoire, by Angus Deaton and Christini H. Paxson. Washington, DC: World Bank, 1991. $5.95.

Indian Muslims in North America, Omar Khalidi, ed. Watertown, MA: South Asia Press, 1991. $22.90.

The Biology of Life Span: A Quantitative Approach, by L.A. Gavrilov and N.S. Gavrilova. New York: Harwood Academic Publishers, 1991. $40.00.

World Bank Development Report 1991: The Challenge of Development. New York: Oxford University Press, 1991. $16.95 paperback.

Gender Differences in Household Resource Allocations, by Duncan Thomas. Washington, DC: World Bank, 1991. $5.95.

Modelling for Population and Sustainable Development, A.J. Gilbert and L.C. Braat, eds. New York: Routledge, Chapman & Hall, 1991. $74.50 hardback.

INDONESIA

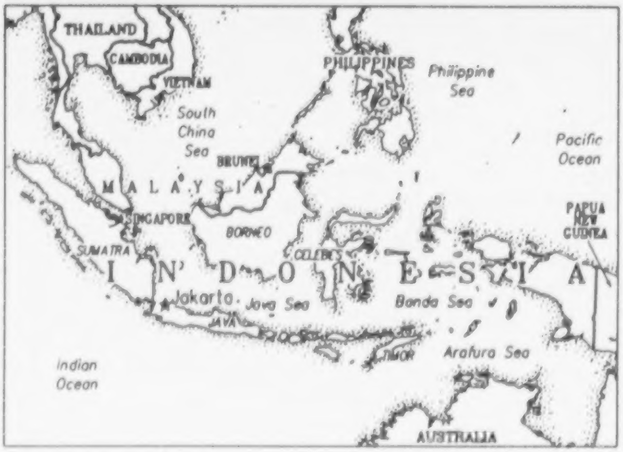
Population: 181.4 million
Land area: 740,100 sq. mi.
Births per 1,000 population: 25
Deaths per 1,000 population: 8
Rate of natural increase: 1.7 percent
Total fertility rate: 3.0
Infant mortality rate: 73 per 1,000 live births
Life expectancy: 61
Capital: Jakarta

by Sasha Loffredo

The vast Indonesian archipelago lies on the Equator between the mainland Asian continent and Australia. Among the ten most populous countries of the world, Indonesia has a population of 181.4 million, about three-fourths that of the United States, but only one-fifth the land area.

Indonesia's people reside on slightly fewer than half of its 13,600 islands. Spread out over isolated areas, Indonesia is culturally diverse, with many different ethnicities, religions and languages. Although the official language is Bahasa Indonesian, residents speak about 25 languages and 250 regional dialects. By far the majority, 80 percent of the population, practice Islam in its many variations. The remaining 20 percent are Christians, Hindus, or animists. Indonesia contains one of the largest Chinese communities in Southeast Asia, totaling more than 2 million.

After declaring independence from The Netherlands in 1945, Indonesia experienced periods of political instability that lasted until President Suharto established the current New Order government in 1966. This government is strongly oriented toward economic and social development, emphasizing industrialization and manufacturing, transportation, and reducing foreign debt. Agriculture still employs half of all workers and accounted for 26 percent of the gross domestic product in 1987.



Almost two-thirds of the population live in the major island group consisting of Java, Madura, and Bali. Government-sponsored transmigration programs from these very densely inhabited islands have been offset by the continual influx of migrants, who are attracted by the economic opportunities and social services found on the more developed islands.

Despite high population growth rates in the past, Indonesia has increased its self-sufficiency in food supply and in providing low-income housing. Education has improved during the past two decades, and literacy rates are rising. The infant mortality rate has decreased steadily over the past 15 years, and currently stands at 73 deaths per 1,000 children under age one.

Indonesia's population growth rate is 1.7 percent each year, lower than the 2.1 percent average for developing countries. The National Family Planning Coordinating Board, which administers government efforts in family planning, is a major success story. Since 1970, the fertility rate has fallen from 5.5 to 3.0 births per woman. Over the past decade, the proportion of married women practicing family planning doubled—to over half. The pill, the IUD, and injectables (hormonal shots effective for two to three months) are the most-used forms of contraception.

Subsidized private marketing of the government's Blue Circle brand contraceptive products has increased access to and use of family planning.

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POPULATION TODAY

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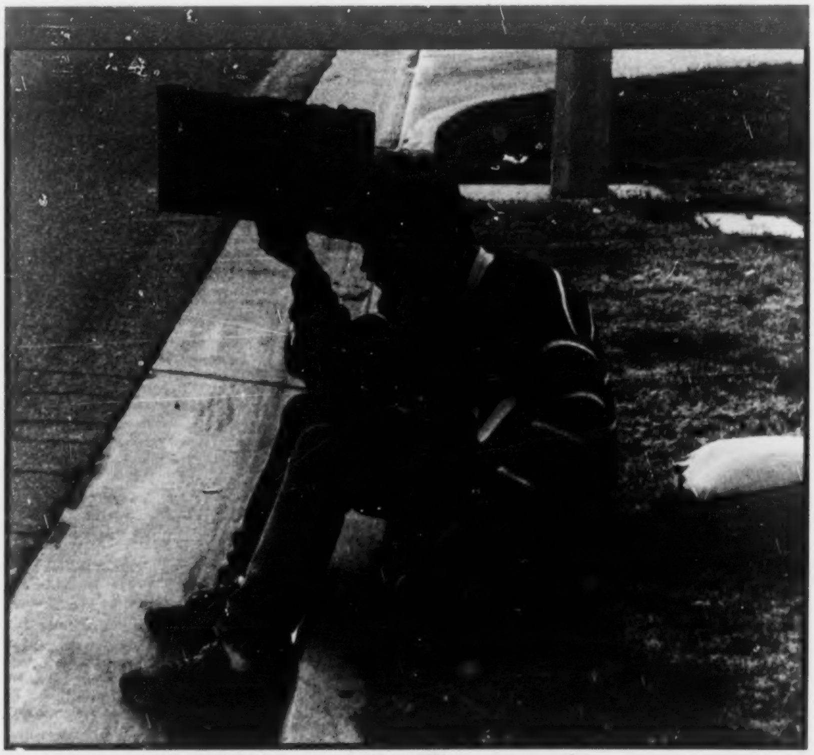

Michael Siluk

Stereotypes of the underclass don't always fit, see page 6.

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FROM THE EDITOR'S DESK

The ideal father: 1990s model. A plane flies overhead. Down on the grassy knoll, a winsome toddler spreads out his arms and runs behind it, pretending to fly. The young father looks on, his sensitive face cherishing the intimate moment.

The airplane bears the logo of USAir, but we see glimpses of America's new model father in other TV ads: heading for McDonalds or the "family villages" of Club Med. Americans have long idealized father and family. "Leave It to Beaver" mythologized the father of the 1950s, while Bill Cosby defined fatherhood for the 1980s.

The 1990s ideal is just emerging. He is the thirtysomething baby boomer, domesticated but never dull, a conscientious caregiver, pushing a stroller.

But while the advertising industry is creating an admirable role model, how well does this image reflect current realities of American family life? A large minority of U.S. children don't see much of their fathers at all. The prevalence of divorce, remarriage, and nonmarital births seems to be eroding the cultural norm that fathers live with and financially support their biological children.

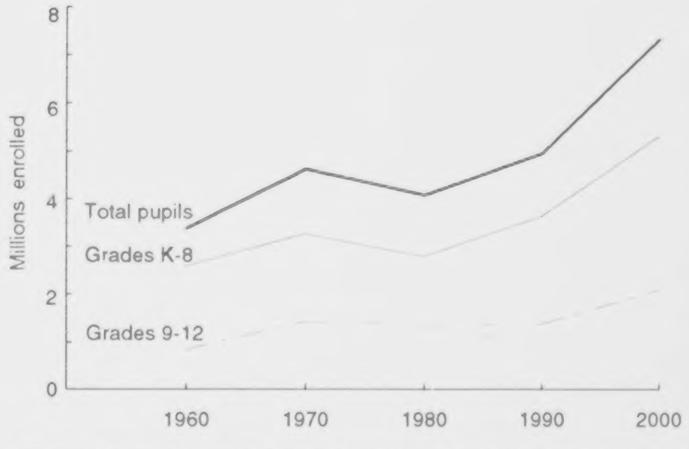
About half of children will spend some time in a single-parent family, demographer Larry Bumpass points out, most of these involving an absent father. Judith Seltzer and Suzanne Bianchi found that about half of all children living apart from their fathers see them less than once a month. Another study showed that half of older children (ages 11-16) in the same situation see their fathers once a year or less frequently. Relatively few divorced mothers receive child support.

As fathers change marriage partners they are switching *children* as well. Men tend to live with, support, and parent the children of their current wife. Seltzer and Bianchi call this "serial" parenting (like serial monogamy). Children whose relationship with father actually resembles the new ideal may be fewer than we think.

—*Susan Kalish*

SPEAKING GRAPHICALLY

Immigration Brings California a "Pupil Boom"



Sources: Jim Parker, "California's Critical Shortage of School Buildings," *Trends* Vol. 4, No. 1, June 1991, Los Angeles County Office of Education, and unpublished data.

There will be a projected 7.3 million pupils in California's public schools in the year 2000, one and one-half times as many as the school system counted in 1990 (4.9 million). The oncoming pupil boom will outnumber the 4.6 million enrolled in 1970, the peak of the baby-boom era.

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Demographic Editor: Carl Haub
Contributing Editors: Sara Adkins-Blanch, Taynia Mann, Alex de Sherbinin, Rhonda Smith
Consulting Editors: Thomas W. Merrick, Winthrop P. Carty, Sharon Hershey, John F. May, Machiko Yanagishita
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728
(202) 483-1100

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Recycled Paper

UN Adds Population to Environment/Development Dialogue

A year ago, it looked as if population-environment linkages would be brushed off at UNCED, the first-ever United Nations Conference on Environment and Development, to be held in Rio de Janeiro this June. Now, population-environment advocates have not only convinced conference planners of the relevance of their issues—but they are pleased with the way it appears the issues will be framed.

Even before preparations began in earnest a year ago for the June "Earth Summit," planners have quietly wrestled over the proper treatment of population at UNCED. The conference was originally to be the second UN conference on the environment, the first having taken place in Stockholm in 1982. Development issues were added to the agenda in response to criticism that the environmental recommendations of the Stockholm conference had failed to take into consideration the development goals of Third World nations.

Delegates to the first planning meeting, "Prepcom 1," in 1990 in Nairobi, purposely excluded population issues as peripheral and potentially divisive. Some Third World delegates feared that developed countries might condition their development assistance on reductions in population growth rates. Others objected to any linkages of Third World population growth with environment issues, arguing that the extravagant consumption habits of developed countries had a much greater environmental impact. Later, Maurice Strong, secretary general of the UNCED meeting, recognized population as a key "cross-cutting issue." It was agreed that population would be brought up with every relevant topic.

Lost in the Shuffle?

However, fearing that population issues would get lost in the shuffle, advocates went to "Prepcom 3" in Geneva, last August, prepared to do battle to win population a place on the agenda. A compromise was struck: population would be placed on the agenda as long as the lavish consumption rates of the industrialized countries would also be up for discussion.

Statements on population-environment-development linkages—with input from concerned organizations such as the United Nations Population Fund (UNFPA), Sierra Club, the Population Crisis Committee, Zero Population Growth, The Futures Group, Worldwatch Institute, and the National Wildlife Federation—were incorporated into the circulating draft agenda.

Now, population issues have "a much better chance of constructive discussion" at UNCED, said Dr. Nafis Sadik, executive director of UNFPA in a recent interview. "I am sure that a consensus will be reached if everyone is prepared to be constructive."

The draft statements discuss demographic dynamics and sustainability, combating poverty, and changing consumption patterns. Discussions of environmental threats posed by rapid population growth are linked with an analysis of the environmental damage caused by excessive consumption.

The document calls not only for sustainable development rather than boom-and-bust extractive industry, but "sustainable livelihoods" for Third World poor and "sustainable consumption patterns" for developed countries. Concern is also expressed for population groups that may be particularly vulnerable to environmental degradation, such as native peoples and coastal dwellers.

Emotionally Laden

The population dynamics statement calls for "policies...incorporating measures to bring about the demographic transition," but as part of a "holistic view of development, where alleviation of poverty, secure livelihoods, health, quality of life, improvement of the status and income of women, fulfillment of her personal aspirations, empowerment of individuals and communities are the ultimate goals." Anything that suggests limiting population growth could be a flashpoint. Indeed, in negotiations, the words "family planning" may be struck in favor of the less emotionally laden terms "reproductive health programs" or even "responsible parenthood" (which the Holy See is said to prefer). Similarly, the less sensitive term "demographics" might be substituted for "population."

Another area of concern is trade barriers, which can operate to keep modern contraceptives out of less developed countries.

The main business of UNCED is concern over "degeneration of global life-support systems." Delegates will adopt an Earth Charter of environmental principles and an environmental work program, Agenda 21. They are expected to negotiate conventions (international agreements) on climate change and biodiversity. Population issues will play only a small part. Still, a conference like UNCED can have great educational value in many areas.

One concept that advocates hope will come through loud and clear is *population momentum.* In many countries, even if the rate of childbearing falls dramatically, the population would still continue to grow for a long time because of the large number of young women entering reproductive age.

As Sadik commented: "We are going to have more people—a lot more people—in 2025 than we have now, whatever we do. The point is to slow down growth so that the numbers of people don't overwhelm our capacity—the world's capacity—to cope. That is a very important idea that everyone involved with the environment and development should take to heart. Not fewer people—but a few less people."

If the draft statements survive the month-long scrutiny of delegates to "Prepcom 4," this March, they will go to UNCED as a small but significant part of Agenda 21, one of the major documents that UNCED will produce. As such, the statements would help lay the intellectual foundation for another first-ever UN meeting: the UN Conference on Population and Environment, planned for 1994.

—Susan Kalish and Win Carty

Making the Census "GO"

Ten years ago CD-ROM (compact disk read-only memory) was experimental technology, used by only a few. Now, the Census Bureau is sending 1990 Census data on CD-ROM to most of its depository libraries and is marketing CD-ROM disks to the general public.

The "GO" software, included by the Census Bureau on every CD-ROM, is so simple to use that it seems likely to make data "crunchers" out of many users who would have simply cited a figure or two from a printed volume in the past. In fact, GO is so straightforward that the Census Bureau thought it unnecessary to send along written instructions.

This article, prepared by Jane Cramer of the Brooklyn College Library, is intended to fill that gap for first-time users of GO. Users can also access census data on CD-ROM through dBase or Paradox.—S.K.

The 1990 Census on CD-ROM works. The STF1-A files, which contain the short-form data (such as age, race, sex, and basic housing information), asked of 100 percent of those enumerated, are ready—complete with GO software for immediate use.

Much Improved

Staff at our census depository library first used GO on the PL-94 disk for congressional redistricting last April. In that preliminary version, GO was awkward to use. For example, census tract data users were frustrated by the software automatically resetting to A or 1 after each table. Woe to the student looking for tracts 925-930. When the STF1-A disks arrived in October, however, we were astonished with the improvements in the GO software.

The new GO is menu driven. It has an A-Z (first letter) index activated by typing the first letter of the desired geographical unit. (For example, once in the city list, type *M* to bring up *M*orristown.) F1 opens a box for instant access to any tract number, and tables can be downloaded to diskette as well as printed.

GO does not aggregate geographical units, but users can store the data they want on their own diskettes, take it away with them, and use a statistical software package of their choice to make further manipulations. Several faculty patrons did this within the desktop and mainframe environments. There is no need for the user to rekey the data.

Using GO

The STF1-A files for the entire United States are contained on 17 CD-ROM disks. The same amount of information would take up 93 computer tapes. Some states, like New York or California, take up an entire disk; other disks contain two or more neighboring states. To start, access the appropriate drive and, after the prompt appears, type "GO" to start the program.

Move the highlight bar to the state you need, and press "Enter." Be patient while the drive reads the disk. A menu of geographic subdivisions appears—ranging from entire states to block groups, congressional districts, and American Indian reservations. Select the level you wish to search by moving the highlight bar and pressing Enter. Some smaller geographic units require detailed knowledge of geographic codes which can be obtained from block group or census tract maps.

Unless you select "State," the next screen will offer a list of substate units: cities, towns, counties, or tracts. Type the first letter of the location to use the A-Z index to move quickly through the list. After the name appears on the screen, hit Enter again to confirm your selection.

To find a specific census tract, press F1 and a box appears in the upper-right portion of the screen. Type in the number of the tract and press enter. When the number appears, press Enter again to confirm your selection.

Selecting a geographic unit brings up a list of available tables: 37 population and 63 housing tables. Choices include the general profile (which contains all the information from the short-form Census questionnaire) plus a variety of cross-tabulations based on age, sex, race, Hispanic origin, or housing type. Select with the highlight bar and press Enter. After viewing the table, you may "Print" it—that is, send the data to the printer or to a disk ("File"). Printing involves making some choices. Press "P." First you will be asked if you want either 1) "Complete table for this area" or 2) "Single item for several areas." Be wary of choice 2. It brings up data for *all* the like geographic units in the data base. When learning this software, library staff accidently printed a lengthy report of 12-year-old Hispanic females in New York by county.

Downloading files to diskettes is fast and easy. A Copy File option allows you to store the file in ASCII flat, ASCII delimited, or dBase. A Browse command lets you view the same type of data for other areas.

You can move between tables for the same location, or any other place on the same CD using the Escape key. When finished, use the End key to exit to DOS.

The library's entire documents division staff is now trained to help patrons with STF1-A on CD-ROM. It takes only about 10 minutes to orient users who need multiple tables to carry on themselves. Before summer, we hope to make the Census available on a LAN (local area network), along with other government CDs, such as the National Trade Data Bank, the City and County Databook, and the Hazardous Materials Information System.

Many of the STF1-A CD-ROMs are available from the Census Bureau or the Government Printing Office for $150 each. STF1-B, C, and D are expected later this year. SFT3-A CD-ROMs, with economic data, are scheduled for late 1992 or early 1993. Consult the bureau's *Monthly Product Announcement* for availability or call the Clearinghouse for Census Data Products at 301-763-1580.

—Jane Cramer

Jane Cramer is document librarian at the Brooklyn College Library.

House Committee Gains Adjusted Census Data

Adjusted data from the 1990 Census will soon be available to researchers, local jurisdictions, and other interested parties. But, you won't be able to get the data from the Census Bureau. At this point, the primary distributor is the House Subcommittee on Census and Population.

In a much-debated but not unexpected action last July, then-Secretary of Commerce Robert Mosbacher decided not to use the adjusted figures as the official 1990 census findings. More controversial was his decision not to release them at all.

Parties to a long-term lawsuit over census adjustment—involving New York City, Los Angeles, and other jurisdictions—received the adjusted data in November through a court order, but were required to keep them under wraps. In December, before Sawyer's committee, Commerce Undersecretary Michael Darby called the adjusted figures seriously "flawed." He provided a memo from bureau Director Barbara Bryant indicating that the adjusted figures in their current state exaggerate the census undercount by about one-third.

The Census Bureau prepared the adjusted figures last July by statistically weighting the counts according to a complex set of 1,392 factors, taken from the bureau's 1990 Post-Enumeration Survey. The adjusted data indicates only age, race, and sex—nothing on housing, family relationship, education level, or income. The procedure was designed to compensate for the national undercount originally estimated at an average of 2.1 percent, in which some groups—notably minorities and inner-city residents—were disproportionately missed. In December, the bureau estimated the undercount at 1.5 percent.

Last summer, the statistical community split on whether to make a first-time-ever adjustment to the U.S. census. Bryant and seven of a nine-member Census Bureau Undercount Steering Committee recommended in favor of adjustment.

Repeated requests for the adjusted data by Tom Sawyer (D-OH), chairman of the House Subcommittee on Census and Population climaxed in a November 19 subpoena. The Department of Commerce first suggested providing data for every tenth census block and, then, in late December, met Sawyer's compromise offer of a random sample of 50 percent of the data.

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by Peter Alsberg—The Washington Post

The adjusted counts, on 52 reels of computer tape, arrived at the subcommittee January 23. The tapes contain adjusted data for a random sample of half the nation's 6.9 million census blocks, as well as aggregate adjusted information for all states and for counties, cities, towns, and other local jurisdictions with populations of 1,000 or more, according to the Council on Professional Associations on Federal Statistics. The committee has sent the tapes to the National Academy of Sciences Committee on National Statistics, which, under the Decennial Census Improvement Act, will advise Congress on the 2000 Census.

Meanwhile, on January 15, Mosbacher quit Commerce to work on President Bush's re-election campaign, leaving Rockwell Schnabel as acting secretary. The compromise may have been pushed forward by a desire to resolve the contentious data availability question, before the beginning of the Senate confirmation hearings for businesswoman Barbara Franklin, President Bush's nominee for commerce secretary.

What difference will the adjusted figures make, coming out now? For most users, probably not much. The adjusted data, which show larger populations of urban dwellers and minorities than do the official census figures, have some political implications. Yet, many jurisdictions have already drawn up their new districts. The numbers' unofficial status will undermine their evidentiary value in arguing for changes in voting boundaries or public fund allocations.

Researchers will find the data of limited utility, since the file contains only information necessary for reapportionment, not social or economic characteristics. For business users, whose bottom line was not much affected by the undercount in the first place, the existence of two sets of census numbers in itself could be a headache, commented Ken Hodges of Donnelley Marketing Information Services.

Local school and health planners in heavily undercounted communities could potentially get the most mileage out of the adjusted figures. John Hedderson, a demographer in Los Angeles County, where the undercount was 4.6 percent (or 430,000 people missed), said of the adjusted data: "Although it will be awkward, we will probably eventually work with them. They will be better than any adjustment we could do, because they are based on smaller geographical areas.

"There are people who just want to work with one set of numbers," commented Hedderson, "but we have entered a new era—where there will be two counts, even if not official."

—Susan Kalish

To request the adjusted 1990 Census data for the United States or individual states contact Rep. Tom Sawyer's office, or Paul DesJardin, Metropolitan Washington Council of Governments, 777 N. Capitol St. NE, Suite 300, Washington, DC 20002-4201. Phone (202) 962-3293, FAX (202) 962-3201. The council will make copies available at $200 per tape plus shipping.

DEMOGRAPHER'S PAGE

Is There a Rural Underclass?

by William P. O'Hare and Brenda Curry-White

This article is based on The Rural Underclass: Examination of Multiple-Problem Populations in Urban and Rural Areas, *a PRB working paper.*

The terms *underclass* and *urban underclass* have become practically synonymous. However, the urban focus of underclass research is not the result of systematically applying a set of underclass criteria to the entire population. This becomes apparent if we examine the rural population for underclass characteristics—such as loose attachment to the workforce, unmarried parenthood, or being a high-school dropout. Following this type of definition, there were an estimated 736,000 rural adults in 1990 who could be characterized as members of a rural underclass. This little-noticed group is more than half the size of the much-studied underclass population in the central cities.

A decade has passed since political journalist Ken Auletta first popularized "underclass" as an umbrella term to characterize a diverse set of marginalized social groups, including the long-term unemployed, welfare mothers, and high-school dropouts. The underclass, wrote Auletta, "generally feels excluded from society, rejects commonly accepted values, suffers from behavioral as well as income deficiencies." Despite some nagging misgivings about the use of the underclass term,[1] many social scientists since then have worked to define the underclass population, measure its size, and identify the forces that draw people into it.

Definitions Work Both Ways

While almost all research on the underclass has limited itself to urban areas, there are striking parallels in socioeconomic and demographic trends for urban and rural populations. The poverty rate in rural America, like that in central cities, is persistently above the national average. In 1986, when the rural economy was in the deepest part of its recent slump, the poverty rate in rural America was equal to that in central cities (18 percent). The rural poor are more likely than the urban poor to be long-term poor—a central component of the underclass concept.

Another characteristic typically used to describe the underclass population is their concentration in high-poverty neighborhoods. Census Bureau data indicate that the rural poor, like their urban counterparts, tend to be concentrated in geographic areas where poverty rates are extremely high.[2] In 1990, about 24 percent of all people in rural areas resided in high-poverty communities, but 39 percent of the rural poor lived in areas with high poverty rates. Among blacks, 68 percent of the rural poor reside in high poverty areas—the same percentage as found among poor blacks in large cities. Among Hispanics, the proportion of rural poor in high poverty areas is somewhat lower than for Hispanics in large cities—44 versus 61 percent.

It has long been apparent that there are pockets of rural poverty that rival inner-city ghettos in terms of depth and persistence of poverty and deprivation. While some are places of long-standing poverty, such as Appalachia or the Mississippi Delta, others are relatively new, such as farming communities of the northern plain states.[3]

University of Chicago sociologist William J. Wilson argues that the out-migration of middle-class blacks from urban ghettos during the 1960s and 1970s was a major factor in the development of inner-city underclass areas.[4] Yet, rural areas have also been experiencing out-migration and population loss since the early 1980s. Rural areas saw a net out-migration of nearly 1 million people between 1986 and 1987 according to the Census Bureau, with the better educated more likely to go.

Many analysts identify the changing economic base of large cities as a factor in the emergence and growth of the urban underclass, citing in particular the decline of high-paying manufacturing jobs and the emergence of lower-paying service-sector jobs. Yet, a similar economic restructuring has taken place in the rural areas. Many of the industries that are the backbone of the rural economy (farming, mining, timber, and routine manufacturing, for example) suffered declines during the 1980s.[5] Mechanization, automation, and the exportation of jobs to countries with cheap labor are eliminating the need for workers with little

Table 1. Distribution of Multi-problem Individuals, 1990

	Number with underclass characteristics	Percent of population group in underclass
Total	**3,085,000**	**2.1**
Race		
White*	1,112,000	1.0
Black*	1,158,000	6.8
Other race*	143,000	2.9
Hispanic	672,000	5.5
Age		
19-34	1,719,000	2.6
35-49	825,000	1.6
50-64	541,000	1.7
Urban/rural residence		
Rural areas	736,000	2.4
Central city	1,279,000	3.4
Suburb	615,000	1.1
Region		
Northeast	541,000	1.8
Midwest	700,000	2.0
South	1,258,000	2.5
West	586,000	1.9

Source: Analysis of 1990 CPS data.
* Hispanics excluded
Note: Residence subtotals do not sum to total because CPS withheld 16 percent of residence codes to protect confidentiality.

William P. O'Hare is director of the Population and Policy Research
Program and Brenda Curry-White is a senior research analyst at
the Urban Research Institute, University of Louisville

Table 2. Underclass Adults: Rural and Central City, 1990

	Rural Areas		Central City	
	Percent of underclass	Percent of population group in underclass	Percent of underclass	Percent of population group in underclass
Total	**100%**	**2.4%**	**100%**	**3.4%**
Gender				
Male	53	2.6	40	2.8
Female	47	2.2	60	4.0
Age				
19-34	48	2.9	59	4.2
35-49	28	2.0	26	2.8
50-64	23	2.2	15	2.5
Race				
White*	55	1.5	17	1.0
Black*	32	9.1	49	7.5
Hispanic	8	7.0	29	6.7
Region				
Northeast	5	1.1	29	4.5
Midwest	19	1.4	27	4.3
South	65	3.5	23	2.6
West	11	2.1	21	2.7

Source: See Table 1.
*Hispanics excluded. "Other race" category is excluded.
Note: Subgroups may not add to total because of rounding.

education, who tend to be concentrated in both inner cities and rural areas.

How Big? How Poor? How Diverse?

Who are the American underclass? This article uses the term underclass to mean adults (age 19-64) with *all* of the following problematic characteristics:[6]

- Has not completed high school;
- Lives in a household that receives public assistance; and
- If female, is a never-married mother, or, if male, is long-term underemployed.

Poverty was not included as a criteria, since the term underclass is useful for distinguishing a group of people who are disconnected from society from those who are merely poor.

Using data from the 1990 March Current Population Survey (CPS), a nationally representative sample survey of about 55,000 households, the study identified a group of 3 million working-age people with this set of characteristics (see Table 1). They represented 2.1 percent of the working-age population in the United States. (Children age 18 and younger and elderly age 65 and older were excluded.) Four out of five were living in poverty (defined as family income below 125 percent of the official poverty level).

Nearly 7 percent of the black adult population was in the underclass compared with just 1 percent of white adults and 5.5 percent of Hispanic adults. The high prevalence of underclass characteristics among minorities and young adults conforms to popular images of the underclass population. Young adults (ages 19-34) are much more likely to be in the underclass as people ages 50 to 64.

Of those 84 percent for whom residence can be determined, more than one-quarter (28 percent) live in rural (nonmetropolitan) areas, almost half (49 percent) in central cities, and almost one-quarter (23 percent) in suburbs. (Here, suburbs refers to areas that are metropolitan but lie outside central cities.) The rate of underclass membership in rural areas is 2.4 percent, just below that in central cities (3.4 percent).

In striking contrast to the popular conception of the underclass being concentrated in the older industrial Frostbelt cities, many more underclass individuals were found in the South (1,258,000) than in the Northeast (541,000) or the Midwest (700,000). It should be remembered that the Census Bureau's South region stretches as far north as Delaware and as far west as Texas and Oklahoma.

Some major differences emerged between rural and urban groups (see Table 2). Women comprise less than half (47 percent) of the rural underclass, but account for 60 percent of the urban underclass. A higher share of young urban females who are never-married mothers may account for this difference.

The rural underclass also has proportionately fewer younger members and more older members. In 1990, less than half (48 percent) of the rural underclass were ages 19 to 34, whereas nearly three-fifths (59 percent) of the urban underclass were in this young age group. Young urban adults were more likely to exhibit underclass characteristics (4.2 percent) than their rural counterparts (2.9 percent). Older adults age 50 to 64 were a more prominent segment of the underclass in rural areas (23 percent) than in central cities (15 percent).

Differences in racial and ethnic composition were particularly striking. In rural areas, 55 percent of the underclass is non-Hispanic white compared with only 17 percent in central cities. Blacks account for about one-third (32 percent) of the rural underclass, but they make up nearly half (49 percent) of the urban underclass. Hispanics are also more prominent among the urban underclass (29 percent) than the rural underclass (8 percent). These rural-urban differences in racial and ethnic composition of the underclass reflect the urban concentration of blacks and Hispanics in general. The prevalence or rate of underclass membership among blacks is actually higher in rural areas (9.1 percent) than it is in urban areas (7.5 percent).

Most of the rural underclass—nearly two-thirds—is located in the South. In

Continued on next page

Demographer's Page

Continued from previous page

contrast, the urban underclass is more evenly distributed among the four census regions. The underclass rate in the rural South (3.5 percent) is higher than in the urban South (2.6 percent). In the Northeast and Midwest, in contrast, the underclass rate in central cities is nearly four times that of rural areas.

Two major points emerge from this research. First, there is a large rural underclass that has not been recognized in the past by researchers. Second, blacks in the rural South actually have a higher prevalence of underclass characteristics than do blacks in the large cities of the urban North. Why? There are a number of potential explanations. It could be that the same factors that led to the emergence of a black underclass in northern cities (racism, selective out-migration, industrial change) were also present in the rural South. Another is that, as Nicholas Lemann hypothesizes, the black underclass of the urban industrial North may have its roots in the rural South; that poor blacks migrating to the large cities of the North brought underclass characteristics with them.[7] Scholars and policymakers who ignore the rural underclass will be missing a significant part of the portrait.

The full report, *The Rural Underclass: Examination of Multi-Problem Populations in Urban and Rural Areas* is available from PRB for $5.00.

Notes:

[1] See O'Hare and Curry-White, *The Rural Underclass*.

[2] U.S. Bureau of the Census, "Poverty in the United States: 1990", *Current Population Reports*, P-60, No. 175 (Washington, DC: GPO, 1991), table 9.

[3] Osha Gray Davidson, *Broken Heartland: The Rise of America's Rural Ghetto* (New York: The Free Press, 1990).

[4] William J. Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy* (Chicago: University of Chicago Press, 1987).

[5] David Brown and Kenneth Deavers, *Rural Economic Development in the 1980s* (Washington, DC: U.S. Department of Agriculture, 1987).

[6] Erol R. Ricketts and Isabel V. Sawhill used similar characteristics in defining underclass areas, see "Defining and Measuring the Underclass," *Journal of Policy Analysis and Management* 7/2 (1988), pp. 316-325.

[7] Nicholas Lemann, *The Promised Land: The Great Black Migration and How It Changed America* (New York: Alfred A. Knopf, 1991).

SURVEY REPORT

Colombia

UNICEF/H. Cerni

Colombian children have fewer brothers and sisters now.

Twenty years ago, the women of Colombia averaged six children each and studies projected that childbearing would remain at this level through 1990. Contrary to those expectations, fertility dropped dramatically. Colombia's current total fertility rate (average lifetime births per woman) is 2.9, one of the lowest in Latin America.

The latest confirmation of fertility declines comes from Colombia's 1990 survey on contraceptive prevalence, demography, and health, conducted by PROFAMILIA (a private, nonprofit family planning organization) with technical assistance from IRD/Macro International and Colombia's National Census and Statistics Department. The survey interviewed 8,644 women, 75 percent of whom lived in urban areas. Sixty percent had secondary or higher education and 3 percent no education.

The survey shows that knowledge of contraceptive methods is all but universal among Colombian women—98.2 percent of fecund women and 99.7 percent of women in union know of a modern method. Forty percent of all interviewees (66 percent of women in union) use contraception. In Colombia, as around the world, voluntary female sterilization has become the most common family planning method, generally used by women who have completed their desired family size but are still of reproductive age. Female sterilization is used by 21 percent of women surveyed, followed by the pill (14 percent) and the IUD (12 percent). These findings represent a slight upturn in use of contraception since the previous survey in 1986.

Knowledge of where to obtain modern contraceptive methods is also almost universal: 98 percent of women in union and 94 percent of all interviewees could name a source of supply. Supply sources most often cited were PROFAMILIA (32 percent), pharmacies (29 percent), and government hospitals and health centers (19 percent).

Ideal family size averaged almost three children (2.6 children for all women and 2.8 for women in union). Yet, two children was the desire of more than half of women interviewed. Forty-three percent said that they want no more children; one in five women (20 percent) want to wait at least two years before having another child. Eleven percent wanted a child within the next two years.

Of the women who had children in the five years prior to the 1990 survey, 80 percent received medical prenatal care and 71 percent had a doctor present at delivery. Children's vaccination rates increased to about half.

Two new topics in this survey were AIDS awareness and domestic violence. Almost all interviewees knew of AIDS (97 percent), and 77 percent knew it could be spread through heterosexual relationships. As for domestic violence, two-thirds of women who have been in a union say that they had fights with their spouses; of these, 47 percent had been insulted and 29 percent had been beaten.

—*Sara Adkins-Blanch*

Louis Henry, 1911-1991

With the December 30th death of French demographer Louis Henry, the field lost a major figure.

His technique of family reconstruction was an important methodological contribution to historical demography. Henry used 16th- to 19th-century parish registers to calculate various demographic measures, such as birth rates, birth intervals, age at marriage, and death rates at different ages. This provided invaluable insights into the lives of ordinary people in past societies. Henry is also known for his description of the pre-transition demographic regime of high fertility and high, fluctuating mortality levels, and is credited with bringing into demography the concept of natural fertility. In addition, Henry worked on the demographic dynamics of the Third World, stages in the reproductive cycle, and models and measures of fertility. He published many seminal papers and books that are still key references.

Born in 1911 and trained as an engineer, Henry came to demography from service as an artillery officer in World War II. He began his demographic work at the National Institute of Demographic Studies (INED) in Paris in 1946 and taught at the Institute of Demography and the School of Advanced Studies in Applied Sciences in Paris. Henry retired in 1976. The International Union for the Scientific Study of Population named him IUSSP Laureate last October.

New Slide Show

PRB's World Population Slide Show provides helpful visuals for teaching or talks. A set of 15 vivid color maps illustrates birth rates, death rates, natural increase, infant mortality, TFR, life expectancy, and population growth and "doubling time" around the world. Also presented are age structure, contraceptive use, government view of fertility level, GNP per capita, percent urban, and population density. Information taken from PRB's *World Population Data Sheet.*

Contact Population Reference Bureau, 1875 Connecticut Avenue, N.W. Suite 520, Washington, DC 20009-5728 (1-800-877-9881). Price: $50 per set, $25 for members and educators.

Upcoming Conferences

- **PAA Annual Conference and associated meetings.** The Population Association of America will meet April 30-May 2, 1992, at the Radisson Hotel in Denver.

Contact: Jen Suter, 202-429-0891.

Associated meetings to be held before PAA include the following:

- **APLIC.** The Association of Population Libraries and Information Centers, April 27-30, with the theme "Population and Environment."

Contact William J. Record, 212-561-8040.

- **Psycho-social Workshop.** April 28-29.

Contact Susan Palmore 919-544-7040.

- **Federal-State Co-op Program.** April 27-29.

Contact Dianne Schmidley, 301-763-7964.

- **State Data Ctr. Prog.** April 26-27.

Contact Kim Jones, 301-763-1580.

- **Options Fellows Program Seminar.** April 29.

Contact Alex de Sherbinin, 202-483-1100.

- **Economic Demography Workshop.** April 29.

Contact Jacob Alex Klerman, 213-393-0411.

- **The Peopling of the Americas.** Will meet in Veracruz, Mexico, May 18-23, 1992, and will highlight population change in the New World since pre-Columbian times. Sponsored by five population associations in the Americas and the International Union for the Scientific Study of Population.

Contact: Bruno Remiche, IUSSP, 34, rue des Augustines, 4000 Liège, Belgium.

- **Fifth Annual Hunger Research Briefing and Exchange.** Will meet at Brown University, April 8-10, 1992. Sponsored by the Alan Shawn Feinstein World Hunger Program, and Interaction, the American Council for Voluntary Action.

Contact: Melissa Phillips, Briefing Coordinator, Brown University, Box 1831, Providence, RI 02912. Phone: 401-863-2700, Fax: 401-863-2192.

POPULATION UPDATE

Estimated United States Population:

As of November 1, 1991	253,610,000
As of November 1, 1990	250,969,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1081.

Estimated World Population:

As of March 1992	5,446,000,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet.*

Latest Provisional Statistics for the U.S.: September 1991

	12 months ending with September					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,135,000	4,146,000	16.4	16.6	16.1	15.9
Deaths	2,149,000	2,174,000	8.5	8.7	8.7	8.9
Natural increase	1,986,000	1,972,000	7.9	7.9	7.4	7.0
Marriages	2,387,000	2,452,000	9.4	9.8	9.7	9.7
Divorces	1,180,000	1,190,000	4.7	4.8	4.7	4.8
Infant deaths	37,000	38,500	9.0	9.3	9.8	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report,* vol. 40, no. 9 (1992).

Letter to the Editor

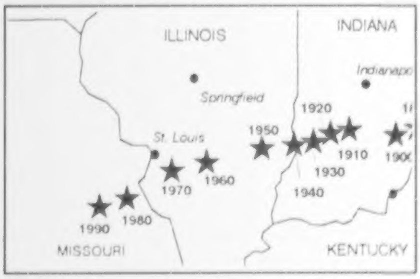
Dear PRB:

For years you have been reminding us that the U.S. population is moving South and West. But I didn't realize how earthshaking a trend this was until I looked at the Center of Population map in the latest *Population Today* [*PT* 12/91]. It appears that half of Philadelphia has slid into Delaware and Cleveland has left the shores of Lake Erie!

Counterbalancing this trend is the eastward shift of St. Louis, which you place in Illinois! Perhaps there is a story here about demographic influences on plate tectonics. Or is this just another example of the problems of putting a TIGER in a box?

Yours in cartographic accuracy,

Reid T. Reynolds
State Demographer
Colorado



"The eastward shift of St. Louis" (partial map)

Census Bureau

Reply: Oops! We obtained the map showing the progress of the geographic Center of U.S. Population since 1790 from the Census Bureau. However, the responsibility for noting inaccuracies is ours.

—*S.K.*

Retiring by Fits and Starts

Americans retire gradually, says a recent study by the Employee Benefit Research Institute (EBRI). Six out of ten U.S. workers leave career employment before age 60, but almost two-thirds of workers remain in the labor force following the end of their longest-held job.

For more information see "The Work and Retirement Patterns of Older Americans," EBRI Issue Brief No. 121 (December 1991), EBRI, 2121 K Street NW, Suite 600, Washington, DC 20037-1896, (202) 659-0670.

TAKE A NUMBER

Censuses from around the world. Population growth during the 1980s was slower than expected, according to preliminary results of Brazil's census, "Censo-91." The 1991 count of 146 million was about 6 million less than projected. Lower-than-expected censuses seem to be something of a trend. Many counts during the 1990 "round" have been coming in low, including Mexico, Spain, and the United States. Except for the western rain forest state of Rondônia, all of the the seven states of Brazil for which data were reported had growth rates below 3 percent annually. Rondônia posted a lofty 7.9 percent annual rate due to heavy in-migration. In 1980, 66 percent of Rondônia's population were immigrants.

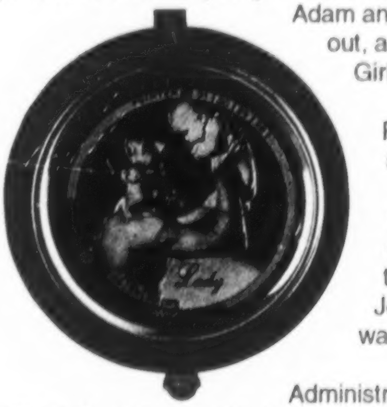
Does the low count really represent slower growth? Maybe not. Censo-91 had many problems, not the least of which was a strike by census workers in the month preceding the count. As a result, many field operations were late in starting.

Islands in the datastream. The world's "little countries" deserve a look, too. They may be small, but they probably take some of the most accurate censuses around. Pitcairn Island's annual report of population to the UN was 52 people for 1990, almost certainly the world's only absolutely complete census. The 114th annual report of the Isle of Man gives a count of 64,282 for the 1986 Census, only a little more than the first census total of 52,387 in 1851. Statistical reports from small countries can get quite folksy: the Isle of Man lists doctors and ministers in the country by name! In Jersey, one of the major islands of the Channel Islands, the March 1991 Census is now reported as 84,082. Rather rapid growth is indicated by census results in the Maldives which had a count of 213,215 in 1990, well up from 142,832 in 1977.

—*Carl Haub*

ADDENDA

Ticked off about the Bioclock. This portrait of dad and baby is but one face of the Bioclock, or Swiss Lady Watch, a novelty timepiece designed to keep a record of the female reproductive cycle. A woman can set the Bioclock to show her fertile and infertile days, as well as the most likely days to conceive a boy or girl. Other watch faces feature a handful of lilies, Adam and Eve, an apple with a bite taken out, and logos such as "FUN" and "Boy/Girl CHAT."



A Miami-based American firm, Fidelity Electronics, imported a supply of the Swiss product and was all set to market it in the United States. Glossy advertising brochures had been prepared showing the watch to be "approved by Dr. Joyce Brothers" (approved for what was not clear).

Then the U.S. Food and Drug Administration stepped in. The FDA judged the Bioclock to be a medical device, and ruled it would have to undergo extensive testing to gain approval. For a time, it appeared the device would be available in Canada, but it was withdrawn from the market there as well, the company citing "lack of consumer interest." —*S.K.*

CURRENT READINGS

LIFE IN BLACK AMERICA, ed. by James S. Jackson. Newbury Park, CA: Sage Publications, 1991. 311 pp. ISBN: 0-8039-3537-4. $16.95 paperback.

This book is the first comprehensive product of a landmark social science research project on black Americans that was started over ten years ago. The project is being carried out by a multidisciplinary team of social scientists at the University of Michigan, organized under the Program for Research on Black Americans. An edited work, each chapter is written by a specialist.

The book takes a life-cycle approach, covering topics such as neighborhood life, family life, religious life, work life, joblessness, retirement, physical and mental health, race identity, and political action. A major strength is the quality of the data that the program has collected in eight interconnected data sets. These provide representative national samples of such typically undersampled groups as young and mentally disabled black Americans; they also supply data on blacks according to political participation and generational status (child, parent, grandparent).

The project hopes to restart the engine of policy research on blacks, which has long been stalled in a debate over the relative importance of race versus economic and social structural factors in explaining black-white status differentials. The introduction states: "...social science paradigms of deficit and problems, which were common in the early 1960s and are even more popular today, are not sufficient in the development of frameworks...to adequately account for observed race-related maltreatment and pathological reactions of individual blacks and black communities; nor could this approach be helpful in the development of public policies to address the underlying issues and remedies...."

There is some attempt to supply a new perspective: one that emphasizes the mechanisms that blacks use, individually and collectively, to mediate a society in which they face disadvantages that arise from *both* social/economic structure and racism. Different chapters use this paradigm with varying degrees of success—understandable, since the authors must do so while respecting the research tradition of their individual topics and staying within the bounds of empiricism.

Life in Black America provides some interesting findings about the lives of African Americans, many of which have policy relevance. It seems quite likely that the ongoing work of this program may move policy towards the core perspective of life for African Americans outlined in this book.

—*Taynia Mann*

HUMAN GEOGRAPHY: Landscapes of Human Activities (3rd edition), by Jerome Fellmann, Arthur Getis, and Judith Getis. Dubuque, IA: Wm. C. Brown Publishers, 1990. ISBN: 0-697-13289-7.

Back in the early 1980s when I took my first human geography course, the class received a bland undergraduate textbook describing mechanistic theories of spatial location. Topics such as innovation diffusion and transportation networks were analyzed in dry, uninspiring terms. It was clear from our heavy eyelids that this entire approach to human geography bore little relation to the world we knew.

Something has happened since that time. Perhaps geography as a discipline has realized that its attempts to ally itself with the hard sciences by generating complex statistical models of spatial interaction may have turned off student interest. In a bid to win back its market share of undergraduate enrollments, geography has returned to its natural strength: illuminating patterns of human activity in descriptive terms.

This text exemplifies the new approach. Lively chapters on culture, population, religion, economic and political activity, development, the environment, and urban systems are spiced with colorful maps, charts, photographs, and other illustrations. Overall, the book should receive high marks from the critics who really count: students.

—*Alex de Sherbinin*

Books Received

Rural Development and Population: Institutions and Policy, by Geoffrey McNicoll and Mead Cain. New York: Oxford University Press and the Population Council, 1990. $12.00

The Silent Revolution: The Informal Sector in Five Asian and Near Eastern Countries, A. Lawrence Chickering and Mohamed Salahdine, eds. San Francisco: International Center for Economic Growth, 1991. $12.95.

State of the World by Lester R. Brown, et al. Washington, DC: Worldwatch Institute, 1992. $10.95.

Beyond Green Belts: Managing Urban Growth in the 21st Century, by John Herington. London: Jessica Kingsley Publishers, 1990. $22.50

The World Bank and the Environment: A Progress Report Fiscal 1991. Washington, DC: World Bank, 1991. $8.95.

Bioethics: Issues and Perspectives, Susan Connor and Hernán Fuenzalida-Puelma, eds. Washington, DC: Pan American Health Organization, 1990. Scientific Publication No. 527. $24.00.

South America, Central America, and the Caribbean 1991, by Europa Publications. Florence, KY: Gale Research Inc., 1990. $220.00.

SPOTLIGHT

ZAIRE

Population: 37.8 million
Land area: 905,560 sq. mi.
Births per 1,000 population: 46
Deaths per 1,000 population: 14
Rate of natural increase: 3.1%
Total fertility rate: 6.1 children per woman
Infant mortality rate: 83 per 1,000 live births
Life expectancy: 52 years
Capital: Kinshasa

by Rhonda Smith

CENTRAL AFRICAN REPUBLIC
SUDAN
CAMEROON
UGANDA
CONGO
GABON
ZAIRE
RWANDA
BURUNDI
Kinshasa
TANZANIA
Cabinda
ANGOLA
ZAMBIA

Amid growing resistance to autocratic rule, Zaire's President Mobutu Sese Seko, who has held absolute power in this impoverished central African nation for 26 years, recently agreed to let opposition leaders form a new coalition government. This historic announcement, in October 1991, followed incidents of looting and violence touched off by soldiers left unpaid. The riots, in turn, triggered a massive evacuation of foreigners and an abrupt withdrawal of most foreign aid. A national conference was convened in early January to bridge differences between the old guard and prodemocracy forces. At this writing, the conference has been suspended and sporadic violence has resumed in several regions of the country.

At just under 38 million people, Zaire is the fifth most populous African nation. Occupying the major part of the Congo River basin and a small part of the Upper Nile, it covers an area approximately the size of the United States east of the Mississippi.

Despite rich mineral resources, including large copper deposits, Zaire has suffered a long-term erosion of its infrastructure and a recent collapse of its economy. In 1989, the government's macroeconomic stabilization program fell apart as public debt increased and crowded out private credit availability. This practice led to hyperinflation and a sharp decline in real incomes. Over the last 10 years, GDP growth (estimated at 2.6 percent) has remained below the population growth rate (3.1 percent). Per capita income remains among the lowest in Africa at US$260.

Despite its economic problems, Zaire has made remarkable progress in establishing an operational, decentralized health-care delivery system. Owing to an extensive private sector effort—an estimated 80 percent of health services are provided by religious groups, private enterprises and donor-supported community-based programs—basic health services reach about two-thirds of the vast interior population. Vaccination coverage rates rose from under 10 percent in 1982 to almost 46 percent in 1990. During that same period, infant mortality rates dropped 10 percent. Mortality of children under age five, currently estimated at 164 per 1,000, declined 35 percent since 1960.

The prevalence of HIV (AIDS' virus) in Kinshasa is estimated at 6 to 8 percent—low compared to neighboring countries. However, 3 percent of newborns in the capital are seropositive, with rural prevalence unknown. As in many African countries, the disease threatens to undermine further advances in reducing mortality.

Family planning services lag behind other primary health activities. Only an estimated 4 percent of women use modern contraceptives. A tendency to see population efforts as diversions from more serious issues, religious opposition, hostility to policies that might change women's traditional roles, and arguments that the country has much still-uninhabited land fuel pronatalist beliefs. At current growth rates, the population will double by the year 2013, making it difficult to maintain even the current substandard quality of life.

With increasing pressure for political reform, Zaire is at the threshold of a new chapter in its history. Conflicting political ideologies and a worsening economic crisis of unprecedented proportions suggest a long and formidable journey ahead.

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POPULATION TODAY

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Tomo Sasaki

One is enough for an increasing number of Japanese families (see story, page 3).

A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

European birth rates equalizing? The 1990s have brought downturns—some precipitous—in the birth rates of several countries of Eastern Europe. The 1990 crude birth rate (CBR) in Bulgaria began a downward path in the late 1980s and fell from 13 per 1,000 population in 1988 to below 12 per 1,000 in 1990. In Poland, the CBR of 16 per 1,000 in 1989 has fallen to 14 according to the latest figures (the twelve-month period ending March, 1991). In the extreme case of Romania, which formerly banned both abortion and contraception, births tumbled from 16 per 1,000 in 1989 to below 12 for the twelve months ending July 1991.

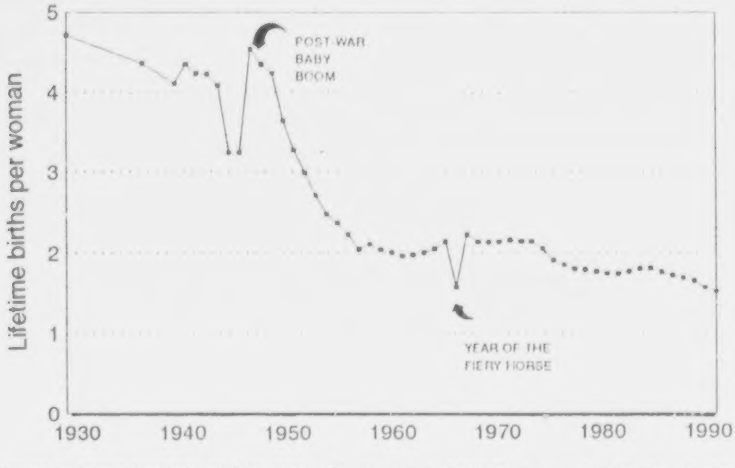
In two other Eastern European nations, birth rates have not changed very much, however. Czechoslovakia's CBR stood at 14 for the twelve-month period ending in July 1991, the same as its 1989 rate. In Hungary, the birth rate for the twelve months ending in September 1991 was 12, essentially the same as in 1989.

During the 1980s, European demographers discussed why the birth rate of Eastern Europe persistently exceeded that of Western Europe—by three or four births per 1,000 population. The difference is relative, of course. The 1980s birth rates of Eastern European countries were already low in world terms—45 per 1,000 for Africa and 28 for Asia in 1989. Still, recalls PRB's Carl Haub, European demographers wondered whether "socialism artificially propped up the birth rate," citing the possible pronatalist effect of Eastern European programs such as rent control, giving priority access to housing to married couples, and subsidizing child care.

Now, with what was once called the Iron Curtain no longer artificially separating Eastern from Western Europe, they are wondering if birth rates will equalize across Europe.

—Susan Kalish

Japan's Steady Fertility Decline



Source: Japan Institute of Population Problems and UN Demographic Yearbook, 1949-50.

Fertility decline in Japan is a long-term trend (see stories, pages 3 and 12). From 1930, when women averaged almost five children in their lifetimes, the total fertility rate plunged during the World War II years, followed by a modest baby boom. The fertility dip in 1966, the Year of the Fiery Horse (which occurs every 60 years), is said to be due to the traditional belief that a girl born that year will not only be unlucky, but she will grow up to murder her husband.

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Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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Japan's Declining Fertility: "1.53 Shock"

In 1990, Japanese newspapers, magazines, and television paid a lot of attention to a phenomenon they called "1.57 shock." The phrase "1.57 shock" (an idea something like "future shock") expressed the country's sense of disbelief that Japanese women were averaging only little more than one and a half children per lifetime.

But the shocks just kept coming. A year later, the Japanese TFR (total fertility rate, or average number of lifetime births a woman could expect to have, given current birth rates) slid further downward to 1.53.

Official estimates showed that Japan's annual population growth rate between 1989 and 1990 had dropped to its lowest postwar level, just 0.33 percent per year. Just-released population projections now show that Japan's population will begin to decline after 2010. And, Japan is already experiencing some demographic consequences of extremely low fertility: a dearth of young workers and an increasing cost of health care for the elderly. According to Tokyo Shoko Research, a shortage of labor has forced the closing of a rising proportion of successful businesses: from less than 1 percent of closings in 1988 to 6 percent in 1990.

In 1990, the Japanese government instituted the Public Opinion Survey on Population Issues, based on a national sample of 22,811 men and women ages 20-69, and plans to repeat the survey every five years. The results were released in March 1991. As the report explains: "There appears to be an increasing possibility that some sort of population policy will be required in the future. Therefore, it is necessary for the government to monitor people's opinion closely on demographic issues."

Minki Chatterji

Marriage remains popular, but family size is problematic.

Some of the major findings:

- The Japanese say they want more children than they are having. The "intended" number of children averaged 2.2 while the number considered "ideal" averaged 2.6. This ideal has not changed appreciably in the past decade, according to Japan's 1977, 1982, and 1987 National Fertility Surveys.
- About 40 percent of the respondents said the recent decline in fertility was undesirable while only 9 percent said desirable. Thirty-five percent of those who said "undesirable" cited "aging of population" as a reason. Twenty-one percent cited "a shortage of labor force," 17 percent "declining sociocultural activity," and 5 percent "declining population size." Sixty-five percent of those who said "undesirable" thought that government should take some action to raise the birth rate. The most frequently cited policies were: 1) reduction of the economic strain of raising a child (53 percent), 2) creation of a more favorable environment for a newlywed couple to have children (for example, more affordable housing, 29 percent), 3) development of child-care facilities and child-care leave (13 percent).
- The traditional norm of Japanese women marrying by age 25 continues to erode. The survey found that 38 percent of women age 25-29 were unmarried. In 1970, only 18 percent of this age group were unmarried. In 1980, it was 24 percent. Nevertheless, all but 2 percent of single women surveyed expected to marry some day.
- The survey questioned attitudes toward such issues as divorce, premarital sexual relations, extramarital relations, the custom of brides taking their husband's name, whether husbands should share the housework, and the traditional practice of a married couple sharing their home with elderly parents, generally the husband's parents. There was a significant gender gap on these issues. The responses suggested a growing critical attitude among women—especially those in their late 20s to late 30s—toward the traditional family system with its three-generation household in which men are not expected to do any housework. On the lifestyle issues of premarital and extramarital sex, women were more conservative than men.
- When asked if Japan's current liberal abortion law should be restricted, from one-quarter to one-third of married people answered "yes." This proportion varied among people of different ages and by sex, increasing among those over 45, especially for women. The abortion rate in Japan is officially estimated at 37.4 per 100 births.
- The proportion of those who viewed sterilization as an acceptable means of family planning—between 25 and 30 percent of respondents—went up with age. Currently, only 7 percent of Japanese married couples that use contraception rely on sterilization.
- Men were much more positive than women toward the legalization of oral contraceptives. The report speculated

Continued on next page

PRB Seeks New President

The Board of Trustees of the Population Reference Bureau has launched a search to identify a new president for PRB. Tom Merrick, who has been PRB president since 1984, will join the World Bank as senior population advisor in September 1992. For details on the position and the search procedure, please contact Colette Thomas, assistant secretary for the PRB Board of Trustees at the Population Reference Bureau, 1875 Connecticut Avenue, NW, Washington, DC 20009-5728, (202) 483-1100.

Eastern Europe Reopens Abortion Debate

The winds of political change blowing through Central and Eastern Europe, combined with economic turmoil, are having a significant impact on family planning and abortion policies. In most countries, the receding influence of Communism has been associated with the rise of a new conservatism. Coalitions of nationalists and the Catholic Church are fostering antiabortion initiatives and calls for a return to "traditional" family values. As one woman commented to Lyn Thomas of the International Planned Parenthood Federation (IPPF), "We have exchanged reproductive rights for democratic rights."

Yet, in the former USSR and elsewhere in the region, abortion remains the major available means for women to avoid unwanted or mistimed births, in part due to the scarcity of modern contraceptive supplies.

In Bulgaria, raging inflation is pricing most people out of the market for contraceptives, but abortion continues to be available at low cost. In Czechoslovakia, an advisory commission is proposing to charge a fee for previously free abortions. Within the country's Czech areas, the cost of an abortion for other than medical reasons went up, while contraceptives remain free on prescription. In Hungary, the Constitutional Court declared the country's liberal abortion regulations unconstitutional and gave parliament until the end of 1992 to change them. Yugoslavia is in a state of fragmentation, with conservative elements directing numerous attacks at the liberal abortion law.

In the former German Democratic Republic, subsidies for contraceptives, organized child care, and kindergartens have been withdrawn or sharply curtailed. The question of how to integrate the liberal abortion legislation still prevailing in the former East German states with the more restrictive Federal German statutes remains unresolved.

In Poland, where the Pope has undertaken a personal effort to rescind the liberal 1956 abortion law of his native country, the Ministry of Health imposed new regulations in May 1990 restricting access to legal abortion. The following September, the Upper House of Parliament approved a Church-backed near-total ban, which was blocked by the Lower House in May. Subsequently, the Congress of Polish Physicians adopted a new Code of Ethics, effective in May 1992, permitting abortions to be performed only to save the life of the woman, or when a pregnancy results from rape. A court appeal has been launched. Parliament is expected to pass antiabortion legislation later this year, despite public opinion polls showing support for continued availability of abortion.

The legalization of abortion and contraception in Romania after the fall of the obsessively pronatalist Ceausescu regime in December 1989 caused the birth rate to plunge [see *PT* February 1992, p. 2]. Abortion use remains strong, with three times as many abortions as births recorded in 1990. Many Romanian physicians share the present prevailing public opinion that all modern methods of contraception are harmful, and that induced abortion is a cleansing process. To make abortion more expensive, the government last June raised the cost of the state-provided procedure from the equivalent of 1 to 10 percent of the average monthly salary.

In Albania, the new government liberalized abortion on a *de facto* basis in June 1991. The Ministry of Health did this by issuing a decree that permitted abortion on request if the husband consents or if the pregnancy is conceived out-of-wedlock.

At the 1990 conference in Tbilisi, Georgia, "From Abortion to Contraception," health officials from what is now the former Soviet Union acknowledged that reliance on abortion is a major health problem. It was officially estimated in 1989 that women of the former Soviet Union averaged three abortions in their reproductive years; other informed estimates put this figure at six or more. As in Romania, physicians have greater financial incentives to perform abortions than to provide contraceptive services. Throughout the region, many initiatives to strengthen family planning are underway, with international help from such organizations as the World Bank, UNFPA, WHO, IPPF, and others. Following the demise of the USSR Ministry of Health last fall, the Russian Republic's Ministry of Health assumed responsibility for continuing negotiations with American, British, Dutch, German, and Japanese firms to produce contraceptives domestically.

—Henry P. David

Adapted with permission from "Abortion in Europe, 1920-91: A Public Health Perspective," *Studies in Family Planning*, 23(1), 1992. Henry P. David is director of the Transnational Family Research Institute in Bethesda, Maryland.

Japanese Fertility

Continued from previous page

that, since 75 percent of Japanese that use contraception rely on the male condom, a man may be more frequently inconvenienced by contraception than a woman. A long-term ban on the pill for routine contraceptive use was upheld in March, the Ministry of Health citing the danger of the spread of AIDS if the pill lessened condom use.

- Many respondents viewed Japan as overpopulated. Almost half (47 percent) considered the current population of 124 million as "too many" or "somewhat too many;" 35 percent replied "just right size"; and 6 percent "somewhat low" or "too low." At the same time, 25 percent saw the prospect of declining population and aging as very undesirable; only 15 percent considered it desirable. Nearly half (48 percent) of those who said "undesirable" were ready to accept a pronatalist policy rather than massive introduction of foreign workers.
- Japan is the largest donor country to UNFPA (United Nations Population Fund). Over 41 percent of those interviewed favored family planning assistance to developing countries.

—Machiko Yanagishita

House Committee Debates U.S. Family Norms

Michael Siluk

Mixing bytes and babies: like half of mothers with children under age three, she's in the labor force.

The U.S. House Select Committee on Children, Youth, and Families, chaired by Rep. Patricia Schroeder (D-CO), met on February 19th for a hearing titled, "America's Families: Conditions, Trends, Hopes, and Fears." Witnesses included Sen. John D. Rockefeller, pollsters, policy analysts, demographers, and even 14-year-old TV personality Jason Zimbler of *Clarissa Explains It All.*

The 36-member House committee, formed in 1983, does not initiate legislation, but issues it airs often find their way into legislative proposals. The first of several sessions planned for this year, it was an appropriate setting for what ensued: a debate about norms of family structure in the United States.

The committee's discussion centered around two issues: first, the viability of the traditional family model and second, whether government policies (for example, welfare programs) discourage the formation of traditional families or encourage the formation of non-traditional families.

The testimonies of Gary Bauer of the Family Research Council and Robert Rector of the Heritage Foundation argued the superiority of the traditional family—defined as the family where father works while mother takes care of the house and children. Deviations from what Bauer called the "breadwinner-homemaker model" have become increasingly prevalent in recent decades. Census Bureau figures show that more than one-fourth of families with children are single-parent families. A recent analysis of CPS data by Decision Demographics, PRB's consulting arm, shows that only about 12 percent of all U.S. families with children consist of a married couple with the father in the labor force and the mother not working outside the home.

Rep. Clyde C. Holloway (R-LA) and Rep. Bob McEwen (R-OH) questioned Sen. Rockefeller (D-WV), who headed the 1991 National Commission on Children, concerning the emotional well-being of children in single-parent families. The commission's report, *Beyond Rhetoric: A New American Agenda for Children and Families,* had concluded that "children do best when they have the personal involvement and material support of a father and a mother." Rockefeller offered his view that the single-parent family should be held in the same regard as the two-parent family.

Rector raised the issue of tax policies, severely criticizing the "eroding value of the personal exemption," the standard deduction that parents can take on their federal income taxes for each child. McEwen brought up the question—much debated among policymakers and policy analysts alike—of whether the current welfare system encourages young, low-income women to have children and remain unmarried by providing an economic incentive not to marry.

Pat Schroeder posed the question: Are we trying to help all families, or only those that fit a narrow definition?

Three demographers presented information on trends in U.S. family structures: Donald Hernandez, chief of the Census Bureau's Marriage and Families Statistics Branch; Thomas Plewes, Associate Commissioner for Employment and Unemployment Statistics; and Greg Duncan, program director of the Survey Research Center at the University of Michigan, Ann Arbor.

Hernandez noted a stratification of income by family type. Well over one-half (62 percent) of single-parent families have incomes of less than $20,000 per year, falling to 37 percent for blended families (that is, step families) and 27 percent for intact married-couple families. Hernandez maintained that today's family structure results from "historic changes in family living arrangements and in mothers' work" that "guarantee...that people will have family experiences which are much more varied than did Americans living during the first two-thirds of this century."

Plewes noted that regardless of family structure, mothers are increasingly likely to be in the labor force, either full-time or part-time. From 1980 to 1991, participation rates for mothers with children under age three increased from 42 to 55 percent. In fact, by 1991 a little over half of the mothers with children under age one were in the labor force. A recent Bureau of Labor Statistics report, however, points out that the increase in women's labor force participation stalled in 1990, although it is too early to tell if growth in women's employment has topped out.

Duncan reported that between 1978 and 1990 the fraction of families with children in the "middle class" (which he defined as those with family incomes between $20,000 and $50,000) fell by 11 percent, while the proportions of higher- and lower-income families increased. Nontraditional family types, especially single parent families, were more vulnerable economically.

Global economic factors, especially those rooted in technological changes in the workplace, underlie these trends, said Duncan. The recession has focused attention on jobs, but the crucial policy issues are longer-term investments in work-related skills, as well as the shorter-run package of taxes and benefits to working and lower-middle class families with children.

—*Laura Ellen Harris*

Dropouts: Doing It By the Numbers

by John H. Ralph and Mary J. Frase

"What is the high school dropout rate?" Policymakers and parents alike want to know how many teenagers drop out of school— in their community and across the nation. For such a simple question, the answers are surprisingly complicated. The dropout rate can mean several things:

- How many students leave school over the course of an academic year?
- How many young people disrupt their education by not completing high school in four continuous years?
- How many young adults end up without a high school education?

Dropping out of high school can be a turning point in the life of a young person, often with lasting consequences for the dropout and for society. Lack of a high school diploma, or its equivalent, suggests to employers that a young person may not have sufficient knowledge or skills to function productively in the workplace. Those who do not complete high school earn less than those who do—30 percent smaller lifetime earnings for males and 45 percent less for females according to one study.[1] Another study indicated that dropouts have a more difficult time in the job market than high school graduates, with one in six dropouts unemployed in 1986 and dropouts twice as likely as graduates to have not found work that year.[2] On a societal level, the dropout rate raises questions about the future competitiveness of the U.S. workforce.

Over the long term, high school completion has risen dramatically in the United States. In 1920, only about one-fifth of people in their late 20s had completed high school, a figure that increased to just over half by 1950.[3] The racial gap in education was extremely deep, with only 6 percent of non-whites completing high school in 1920. Today, the gap in dropout rates for blacks and whites seems to be closing, but remains wide for Hispanics, as the chart on the facing page shows.

Dropouts and Stopouts

Dropping out of school occurs for a variety of reasons and at various times. A student may leave high school because of academic, school disciplinary, or family difficulties, because of pregnancy, or to get a job. Low socioeconomic status is a major risk factor. However, dropping out is not always associated with poor academic performance or low ability as measured by standardized tests. In the long-term High School and Beyond study of the sophomore class of 1980, two out of three of those who dropped out had grade averages of "C" or better. On standardized tests, about half the dropouts in the study scored in the bottom quintile, however, 80 percent of their low-scoring counterparts graduated on time.[4]

Dropping out occurs throughout the high school years. Between October 1989 and October 1990, 3.0 percent of 15 year olds, 2.6 percent of 16-17 year olds, and 5.4 percent of 18-19 year olds dropped out of school. Some drop out even earlier. Findings from the ongoing National Education Longitudinal Study (NELS:88) suggest that 6.8 percent of students who were in the 8th grade in 1988 had dropped out of school by the time their class reached 10th grade in 1990.

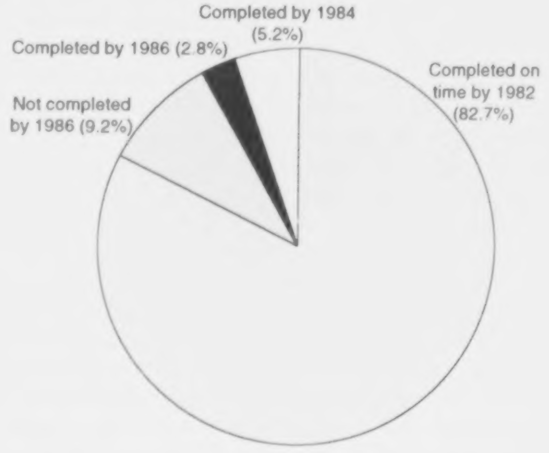
A considerable number of students who drop out return to complete high school months or years later, becoming late completers: "stopouts" rather than dropouts. In the High School and Beyond study, 82.7 percent completed high school by June 1982 (see Figure 1). An additional 5.2 percent had completed high school two years later. By 1986, four years after the "on time" graduation date, another 2.8 percent had completed, leaving 9.2 percent who had still not completed their high school education.

About one-third of the late completers obtain a regular diploma. About two-thirds earn a high school equivalency certificate such as passing the General Education Development (GED) test, administered by the American Council on Education. More than 630,000 people in the United States took the GED test in 1989, with 357,000 receiving credentials.

Measuring the Dropout Rate

Dropping out is a notoriously difficult phenomenon to measure, especially on the local level. School systems differ on when to classify as a dropout a student who has been absent for a period of time.

Figure 1. On-time Graduates, Dropouts, and Late Completers: Sophomore Class of 1980



Source: U.S. Department of Education, *Dropout Rates in the United States: 1988*, prepared for the National Center for Education Statistics by Mary J. Frase (Washington, DC: GPO, 1989), Table 13.

John H. Ralph is Branch Chief of the Policy and Review Branch and
Mary J. Frase is Senior Analyst of the Data Development Division
at the National Center for Education Statistics

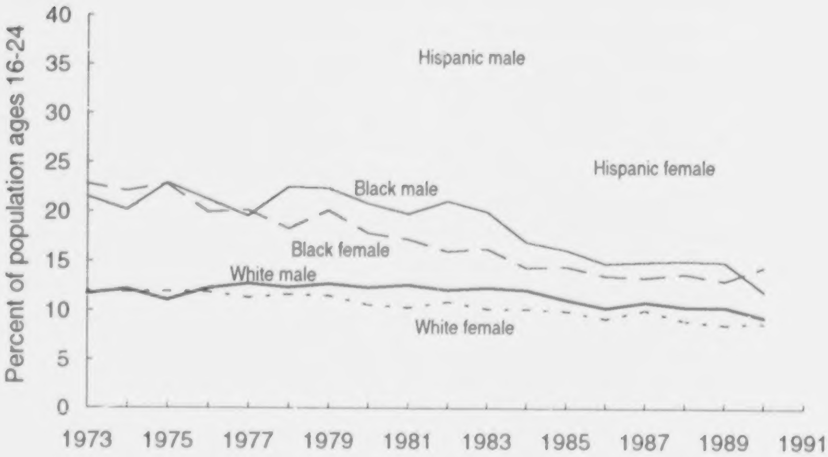
Returnees and multiple incidents of dropping out create measurement problems. Moreover, the United States is an extremely mobile society. Students whose families move from one school district to another may be inadvertently classified as dropouts. Private school students are sometimes miscounted, plus states vary in how they classify young adults in prison or in the military. For all these reasons, measures that rely on school-level information frequently overstate the dropout rate.

At the national level, the dropout rate is tracked through a supplement of education questions included in the Census Bureau's October Current Population Survey (CPS). It is reported (since 1989) in the National Center for Education Statistics' annual report to Congress on dropout and retention rates, which contains most of the data cited in this article. The survey identifies people 15 and older who were enrolled in grades 10 to 12 a year ago, are not enrolled now, and have not completed high school. The CPS data yield several measures, the most important of which are the event dropout rate and the status dropout rate.

- **The event dropout rate.** This measure tells the proportion of students who drop out over a given 12-month period and have not returned. To obtain this rate, dropouts (those who during the past year left grades 10-12 without completing) are divided by the sum of dropouts plus those who graduated or are still in school. The school-age population is defined as those 15-24. Between October 1989 and October 1990, some 4.1 percent of 15-24 year olds in grades 10-12 dropped out of school before completion or about 347,000 students.

- **The status dropout rate.** Those individuals in a specified age range who have not completed high school and are not currently enrolled in school are called *status dropouts.* Status dropout rates include people who have dropped out over a multi-year period, so they are considerably higher than event dropout rates for a single year. In 1990, about 12.1 percent of persons age 16-24, about 3.8 million people, were classified as status dropouts.

Figure 2. Status Dropout Rates, by Race, Ethnicity, and Sex, Ages 16-24: 1973-1990



Note: Black and white data are for non-Hispanic blacks and whites only.
Source: U.S. Department of Education, *Dropout Rates in the United States: 1990,* prepared for the National Center for Education Statistics by Phillip Kaufman, Marilyn M. McMillen, and Summer D. Whitener (Washington, DC: GPO, 1991), Figure 4.

A Mixed Picture

Dropout rates vary by race, ethnicity, and sex, as Figure 2 shows. Dropout rates of blacks, historically higher than those of whites, remain higher today—but the racial difference is getting smaller. In 1975, 22.9 percent of non-Hispanic black males ages 16-24 were neither in school nor held a high school credential, while only 10.9 percent of their non-Hispanic white counterparts were in that situation. By 1990, only 9.3 percent of white and 11.9 percent of black males of that age were status dropouts. Thus, over the course of 15 years, the racial gap narrowed from almost 14 to less than 3 percentage points. Gender differences in likelihood of being a dropout within racial groups also seem to be disappearing.

The status dropout rates for Hispanics are relatively higher, above 30 percent, for most of the past decade. One factor is that Hispanics seem to be less likely than non-Hispanics to return to high school or complete by means of an equivalency test once they have dropped out. About half of both black and white dropouts in the High School and Beyond study, but only about one-third of Hispanics, returned to complete high school.

At older ages as well, the racial gap in high school attainment can be observed to be narrowing. The high school completion rate of blacks has increased at a faster rate than for whites since the early 1970s.

In 1973, 62 percent of blacks age 30-34 had completed high school, compared with 80 percent of whites that age.[5] In 1990, 83 percent of blacks age 30-34 had completed high school, compared with 91 percent of whites. In contrast, throughout the 1970s and 1980s, no more than 60 percent of Hispanic 30-34 year olds had completed high school. Immigrants without U.S. high school credentials may account for part of this gap.

Continued on next page

Demographer's Page

Continued from previous page

In a sense, the high school dropout phenomenon is part of a larger youth trend that demographer Ronald Rindfuss calls "disorder in the life course."[6] Rindfuss points out that, increasingly, young people do not pass the milestones of adulthood in the traditional order that is, first completing one's education, then getting married, then establishing a household, and, after that, having children.

Instead, many young people may set up a household first and marry later, and may finish their education (especially a post-college degree) still later. Evidently, failure to complete high school within the expected time is not the end of the education story for many young people who drop out, which suggests that dropout programs should include not only prevention efforts but also a component targeted at returnees.

There may always remain frustration at the lack of a single dropout measure, particularly one that might serve as a report card on the functioning of local schools. But the dropout debate should not distract us from more basic problems concerning the effectiveness of our educational system—such as low learning levels for high school graduates as well as dropouts and continuing wide gaps in cognition performance between racial and ethnic groups at all educational levels.

Notes:

1. Theodore C. Wagenaar, "What Do We Know About Dropping Out of High School?" *Research in the Sociology of Education and Socialization*, 7 (1987), pp. 161-190.
2. James P. Markey, "The Labor Market Problems of Today's High School Dropouts," *Monthly Labor Review* 111, no. 6 (June 1988), pp. 36-43.
3. Jeanne E. Griffith, Mary J. Frase, and John H. Ralph, *American Education: The Challenge of Change*, PRB *Population Bulletin* 44, no. 4, (1989).
4. John Ralph and Laura Hersch Salganik, "Dropouts, School Performance, and Standards: What is the Causal Link?" *Youth Policy* (February 1988).
5. Phillip Kaufman, Marilyn M. McMillen, and Summer D. Whitener, *Dropout Rates in the United States, 1990* (Washington, DC: GPO, 1991).
6. Ronald R. Rindfuss, "The Young Adult Years: Diversity, Structural Change, and Fertility," *Demography* 28, no. 4, (November 1991).

The World According to Generation X

In the only novel we've seen that defines terms in the margins and includes an appendix with Census Bureau factoids—young Canadian writer Douglas Coupland spins social satire from the threads of demographic theory.

The theory in question is Richard Easterlin's notion that "the success of a generation's members may be crucially affected by how numerous they are" (*Birth and Fortune*, 1980). In Coupland's novel, *Generation X: Tales for an Accelerated Culture*, protagonists Andy, Claire, and Dag live in a Southern California edge city, work in McJobs (see below), and console each other about life's scarce pickings. The philosophical Dag blames his quasi-voluntary underemployment on the enormous size of the generation that preceeded him, which gobbled up the housing-jobs-opportunity banquet and left him only a few stale crumbs.

Dag calls the target of his envy "baby boomers," but demographers would more properly call them "leading edge" boomers. The feckless, pushing-thirty crew that populates *Generation X* are themselves "trailing edge" boomers, born after 1955 (baby-boom births span 1946-1964).

The novel abounds with new terms for social phenomena, coined or collected—and succinctly defined—by Douglas Coupland. Here is a sampling:

Air Family: Describes the false sense of community and intimacy experienced among coworkers in an office environment.

Bleeding Ponytail: An aging sold-out baby boomer who pines for hippie or pre-sellout days.

Boomer Envy: Envy of material wealth and long-range material security accrued by older members of the baby-boom generation by virtue of fortunate births.

Divorce Assumption: A form of Safety Net-ism, the belief that if a marriage doesn't work out, there is no problem because partners can simply seek a divorce.

Earth Tones: A youthful subgroup interested in vegetarianism, tie-dyed outfits, mild recreational drugs, and good stereo equipment. Earnest, frequently lacking in humor.

Down-nesting: The tendency of parents to move to smaller, guest-room-free houses after the children have moved away so as to avoid children age 20 to 30 who have boomeranged home.

Homeowner Envy: Feelings of jealousy generated in the young and disenfranchised when facing gruesome housing statistics.

Lessness: A philosophy whereby one reconciles oneself with diminishing expectations of material wealth: "I've given up wanting to make a killing or be a bigshot. I just want to find happiness and maybe open up a little roadside café in Idaho."

Occupational Slumming: Taking a job well beneath one's skills or education level as a means of retreat from adult responsibilities and/or avoiding possible failure in one's true occupation.

Squires: The most common X generation subgroup and the only subgroup given to breeding. Squires exist almost exclusively in couples and are recognizable by their frantic attempts to recreate a semblance of Eisenhower-era plenitude in their daily lives in the face of exorbitant housing prices and two-job lifestyles.

Legislated Nostalgia: To force a body of people to have memories they do not actually possess: "*How can I be a part of the 1960s generation when I don't even remember any of it?*"

McJob: A low-pay, low-prestige, low-dignity, low-benefit, no-future job in the service sector. Frequently considered a satisfying career choice by people who have never held one.

Safety Net-ism: The belief that there will always be a financial and emotional safety net to buffer life's hurts. Usually parents.

Veal-fattening Pen: Small, cramped office workstation built of fabric-covered disassemblable wall partitions and inhabited by junior staff members. Named after the small preslaughter cubicles used by the cattle industry. Also, Junior Stockyard or Junior Ghetto.

—Susan Kalish

Joseph L. Fisher, 1914-1992

We are saddened by the death of Joseph L. Fisher, the Chairman of the Board of Trustees of the Population Reference Bureau, who passed away at his home on February 19th after a long struggle with cancer. He had served as the Chairman of the PRB board since 1988. He also served as a Trustee from 1981 to 1987. He was elected PRB Honorary Fellow in 1987.

Population was one of many areas of interest of this distinguished man, who served Virginia's 10th Congressional District in the U.S. House of Representatives. He was chairman of the Arlington County Board, secretary of the Virginia Department of Human Resources under former Governor Charles Robb, and president of the environmental research foundation Resources for the Future for over a decade.

At the time of his death, Dr. Fisher was Distinguished Visiting Professor of Political Economy at George Mason University where, as Special Assistant to the President, he was active in fostering the development of the young Northern Virginia institution.

Born in Pawtucket, Rhode Island, Fisher graduated from Bowdoin College in 1935 and received a Ph.D. in Economics from Harvard University in 1947 and an M.A. in Education from the George Washington University in 1952. Before World War II, he worked for the National Planning Board, and then served with the Army in the Pacific.

He was an executive officer and senior economist with the Council of Economic Advisers from the end of the war until 1953. He then joined Resources for the Future, where he served as president between 1959 and 1974. In 1973, he was elected to the Arlington County Board, where he became an advocate of reform and regional cooperation. Beginning in 1974 he served three two-year terms in the U.S. House of Representatives.

Fisher wrote many articles and books and taught at various universities including Harvard, the University of California (at Berkeley and Santa Cruz), the University of Colorado, the Industrial College of the Armed Forces, George Washington University, Virginia Commonwealth University, and George Mason University. He served on the boards of numerous organizations, including the National Academy of Public Administration, Wilderness Society, American Forestry Association, Environment and Energy Study Institute, Teachers Insurance and Annuity Association, and the World Future Society.

The executive committee of the board has elected Charles S. Tidball, M.D., to serve the remainder of Dr. Fisher's term as chair. Dr. Tidball, recently retired from George Washington University, has been a member of the board since 1988.

As an editorial in the *Washington Post* noted, Fisher "combined a first rate intellect with a strong commitment to principle."

"Joe gave us dedicated and caring leadership," commented PRB's President, Tom Merrick. "His ability to pull people of disparate viewpoints together to work toward a common goal was unique. We will deeply miss his wise and friendly counsel."

POPULATION UPDATE

Estimated United States Population:

As of December 1, 1991	253,887,000
As of December 1, 1990	251,172,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1082.

Estimated World Population:

As of April 1992	5,453,000,000
Annual growth	93,000,000

Extrapolated from the mid-1991 population on PRB's *1991 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: October 1991

	12 months ending with October					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,127,000	4,159,000	16.3	16.6	16.1	15.9
Deaths	2,153,000	2,174,000	8.5	8.7	8.6	8.9
Natural increase	1,974,000	1,985,000	7.8	7.9	7.5	7.0
Marriages	2,390,000	2,462,000	9.4	9.8	9.6	9.7
Divorces	1,189,000	1,185,000	4.7	4.7	4.7	4.8
Infant deaths	36,800	38,400	8.9	9.2	9.8	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 40, no. 10 (1992).

Upcoming Conferences

- **National Carrying Capacity Issues Conference,** Washington, DC, June 19-21, 1992. Activists, policymakers, academics and journalists will examine policy options concerning land use, water resources, energy consumption and alternatives, sustainable agriculture, the linkages between population and environment, growth management, and other issues.
Contact: Carrying Capacity Network, 1325 G Street, NW, Washington, DC 20005. Phone: 202-879-3044 or 800-466-4866, Fax: 202-879-3019.

- **Creating the 21st Century: Institutions and Social Change,** Anaheim Hilton Hotel and Towers, Anaheim, California, August 14-16, 1992. Leading futurists will share ideas on new technologies, education, business, government, the environment, health, the family, and much more.
Contact: World Future Society, 7910 Woodmont Avenue, Suite 450, Bethesda, MD 20814. Phone: 301-656-8274, Fax: 301-951-0394.

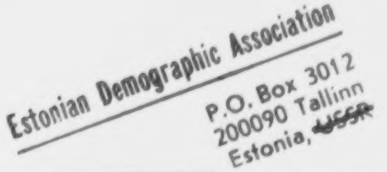
TAKE A NUMBER

States Population Estimates, 1991 and Change Since the 1990 Census

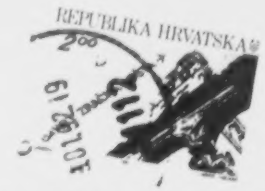
	July 1st 1991 (in 1,000s)	April 1st 1990 (in 1,000s)	Change 1990-1991 (in 1,000s)	Percent change
UNITED STATES	**252,177**	**248,710**	**3,467**	**1.4**
NORTHEAST	**50,976**	**50,809**	**167**	**0.3**
New England	**13,197**	**13,207**	**-10**	**-0.1**
Maine	1,235	1,228	7	0.5
New Hampshire	1,105	1,109	-5	-0.4
Vermont	567	563	4	0.7
Massachusetts	5,996	6,016	-20	-0.3
Rhode Island	1,004	1,003	1	0.1
Connecticut	3,291	3,287	4	0.1
Middle Atlantic	**37,779**	**37,602**	**177**	**0.5**
New York	18,058	17,990	67	0.4
New Jersey	7,760	7,730	30	0.4
Pennsylvania	11,961	11,882	79	0.7
MIDWEST	**60,225**	**59,669**	**556**	**0.9**
East North Central	**42,414**	**42,009**	**405**	**1.0**
Ohio	10,939	10,847	92	0.8
Indiana	5,610	5,544	65	1.2
Illinois	11,543	11,431	112	1.0
Michigan	9,368	9,295	72	0.8
Wisconsin	4,955	4,892	63	1.3
West North Central	**17,811**	**17,660**	**151**	**0.9**
Minnesota	4,432	4,375	57	1.3
Iowa	2,795	2,777	18	0.7
Missouri	5,158	5,117	41	0.8
North Dakota	635	639	-4	-0.7
South Dakota	703	696	7	1.0
Nebraska	1,593	1,578	14	0.9
Kansas	2,495	2,478	17	0.7
SOUTH	**86,916**	**85,446**	**1,470**	**1.7**
South Atlantic	**44,421**	**43,567**	**854**	**2.0**
Delaware	680	666	14	2.1
Maryland	4,860	4,781	78	1.6
District of Columbia	598	607	-9	-1.4
Virginia	6,286	6,187	99	1.6
West Virginia	1,801	1,793	7	0.4
North Carolina	6,737	6,629	108	1.6
South Carolina	3,560	3,487	73	2.1
Georgia	6,623	6,478	144	2.2
Florida	13,277	12,938	339	2.6
East South Central	**15,347**	**15,176**	**171**	**1.1**
Kentucky	3,713	3,685	28	0.8
Tennessee	4,953	4,877	76	1.5
Alabama	4,089	4,041	49	1.2
Mississippi	2,592	2,573	19	0.7
West South Central	**27,147**	**26,703**	**445**	**1.7**
Arkansas	2,372	2,351	21	0.9
Louisiana	4,252	4,220	32	0.7
Oklahoma	3,175	3,146	29	0.9
Texas	17,349	16,987	363	2.1
WEST	**54,060**	**52,786**	**1,274**	**2.4**
Mountain	**14,035**	**13,659**	**377**	**2.8**
Montana	808	799	9	1.2
Idaho	1,039	1,007	33	3.2
Wyoming	460	454	6	1.3
Colorado	3,377	3,294	82	2.5
New Mexico	1,548	1,515	33	2.2
Arizona	3,750	3,665	84	2.3
Utah	1,770	1,723	47	2.7
Nevada	1,284	1,202	82	6.8
Pacific	**40,025**	**39,127**	**897**	**2.3**
Washington	5,018	4,867	151	3.1
Oregon	2,922	2,842	80	2.8
California	30,380	29,760	620	2.1
Alaska	570	550	20	3.7
Hawaii	1,135	1,108	27	2.4

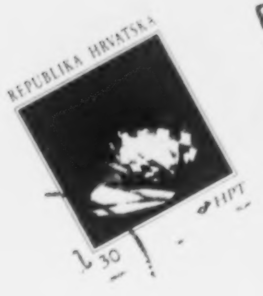
Note: change and percent change based on unrounded data.
Source: U.S. Bureau of the Census.

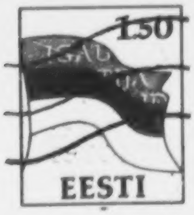
In the Census Bureau's first set of state population estimates since the 1990 Census, formerly fast-growing New England has begun to lose population. The Gulf states, particularly Texas, are on the rise again. While both California and Florida remain big gainers, the pace of their increase has slowed.

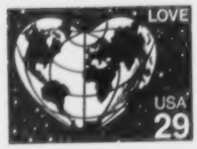


Estonian Demographic Association
P.O. Box 3012
200090 Tallinn
Estonia, ~~USSR~~









We're finding signs of the times in our mailbox: stamps from nations so new that old return addresses (e.g. USSR) on the stationery are still being changed by hand.

Here are stamps from newly sovereign countries of Estonia and Croatia (Hrvatska), along with a U.S. response to the new order: the 1992 love stamp, a world map displayed in a highly unusual projection—a heart-shaped earth against a starry sky.

CONSUMER POWER: How Americans Spend Their Money, by Margaret Ambry. Ithaca: New Strategist Publications, 1991. 461 pp. $69.95. ISBN: 0-9628092-0-9.

This book takes advantage of one of the most underused federal datasets: the Consumer Expenditure Survey (CEX). The CEX is produced by the U.S. Department of Labor's Bureau of Labor Statistics (BLS) based on detailed consumer expenditure data gathered from a national sample of Americans every year by the U.S. Census Bureau.

Consumer Power offers a vast array of tables generated from the 1988 CEX, and includes projections to 1995 and 2000 based on the Census Bureau's projections for number of households by age of householder. The bulk of the book consists of detailed tables for each of nine expenditure areas, including: 1) food and alcoholic beverages; 2) housing: shelter and utilities; 3) household operations and furnishings; 4) apparel and apparel services; 5) transportation; 6) health care; 7) entertainment; 8) personal care, reading, education, tobacco products; and 9) financial products and services, cash contributions, gifts, and other items.

Tables provide data by age, income, and household type. Five-year trends from the Consumer Expenditure Survey are also provided in each section. A summary chapter offers tables for all products and services given by several demographic characteristics of consumer units.

This book provides a very useful summary of expenditure patterns for different types of consumer units as well as detailed information on products or services. Dr. Ambry has done a good job of making the tables readable and the subject matter is well organized. For anyone trying to grasp the broad trends and patterns in consumer spending, *Consumer Power* is well worth the price.

—William P. O'Hare

THE DISTRIBUTION OF WELFARE IN GHANA, 1987-88, by Parl Glewee and Kwaku A. Twum-Baah. Washington, DC: World Bank, 1991. 94 pp. $7.95. ISBN: 0-8213-173-6.

This report is based on the Ghana Living Standard Survey (GLSS) which obtained information on the living standards of Ghanaians from a sample of 3,200 households in 1987 and 1988. Using household expenditures as a measure, the authors find disturbing evidence of inequalities between rural and urban areas, as well as between the coastal, forest and savannah regions of the country. These findings and the suggested remedies have implications for policymakers.

Despite its contribution to policy formulation, the report is flawed in several respects. The study divides Ghana into three geo-ecological regions which are unrelated to the ten political divisions where policy formulation and implementation take place. Thus, interpretation of findings for policy implementation is rendered difficult. Also, the poverty measure in the study—arbitrarily set at 32,500 cedis per year (about $US176)—may be of less significance to policymakers than a poverty measure based on minimum calorie intake.

The authors ignore cultural variables in their study. For example, the incomes and expenditures of the self-employed and farmers are more likely to be understated, inaccurate and/or unreliable than persons who work in the more formal sectors of the economy. Rural household expenditures which are based on the exchange economy also tend to undervalue rural welfare because of the prevalence of reciprocal relationships, mutual aid, and self-help activity in these communities.

The report neglects to mention the effect of community services on welfare, or discuss the quality and accessibility of community services to rural and urban residents. The report does not provide answers to critical questions about what makes some regions and groups in the country more vulnerable than others, and how household and community welfare can be improved. As an exploratory piece, however, the report is worth reading.

—Michael Burayidi

Books Received

Applied Demography: An Introduction to Basic Concepts, Methods, and Data, by Steve H. Murdock and David R. Ellis. Boulder, CO: Westview Press, 1991. 299 pp. ISBN: 0-8133-8372-2. $29.95.

Family Development, supplementary course materials, by Susan S. Coady. Dubuque, IA: Kendall/Hunt Publishing Co., 1992. 53 pp. ISBN: 0-8403-7309-0. $6.95.

Taking Population Seriously, by Frances Moore Lappé and Rachel Schurman. San Francisco: Institute for Food and Development Policy, 1990. 87 pp. ISBN: 0-935028-54-4. $7.95

Zimbabwe: Financing Health Services, World Bank. Washington, DC: World Bank, 1992. 84 pp. ISBN: 0-8213-1900-0. $7.95.

Organizing and Managing Tropical Disease Control Programs, by Bernard H. Liese, et al. Washington, DC: World Bank Technical Paper #159, 1991. 51 pp. ISBN: 0-8213-1959-0. $6.95.

Dynamics of Nutrient Cycling and Food Webs, by D.L. DeAngelis. New York: Chapman and Hall, Population and Community Biology Series 9, 1992. 270 pp. ISBN: 0-412-29840-6 $35.00, paperback.

SPOTLIGHT

Japan

Population: 123.8 million
Land area: 143,750 sq. mi.
Births per 1,000 population: 10
Deaths per 1,000 population: 7
Rate of natural increase: 0.3
Total fertility rate: 1.5
Infant mortality rate: 4.5 per 1,000 live births
Life expectancy: 79
Capital: Tokyo

by Machiko Yanagishita

CHINA
U.S.S.R.
Sea of Japan
HOKKAIDO
Occupied by Soviet Union since 1945, claimed by Japan
N. KOREA
JAPAN
S. KOREA
HONSHU
Tokyo
PACIFIC OCEAN
SHIKOKU
KYUSHU
Philippine Sea

Japan, with a surface area slightly smaller than California, lies on the northwest side of the Pacific Ocean stretching 2,400 miles from North to South. The country consists of four major islands and about 3,900 small islands. About 72 percent of Japan's land area is mountainous (many are volcanic), and its 124 million people are squeezed into the remaining 28 percent. About one-quarter of the total population lives in the Tokyo metropolitan area.

Although the population is 99 percent Japanese, the country has several minority groups, including Koreans, Ainu, and Buraku. Although the social and human rights of such minorities are now secured under the law, residential segregation and unfair employment practices have not disappeared completely.

Thriving manufacturing growth over the past four decades has made Japan a leading economic power, with a gross national product of US$2.9 trillion. With scarce natural resources, the country's economy is highly dependent on the import of raw materials and export of value-added industrial products. Japan depends more on imported food than any other industrialized country and imports 99 percent of its oil.

After the oil crisis of the early 1970s, Japan made efforts to reduce oil consumption including recycling and to manufacture energy-efficient consumer goods such as refrigerators, television sets, and cars. The proportion of oil in Japan's overall energy use subsequently dropped—from 73 percent in 1975 to 57 percent in 1989—with nuclear energy taking up much of the slack.

The demographic transition from high to low levels of mortality and fertility started much later in Japan than in other industrialized countries, but occurred very quickly (see stories, pages 2 and 3). In 1925, the life expectancy at birth was 43 years and women averaged 5.1 births. By 1940, life expectancy had increased to 50 years, while the TFR had fallen to 4.1 children.

Immediately after World War II, amid devastated living conditions, Japan experienced an acute annual population growth of 5 percent, due to a surge of returns from abroad and a modest post-war baby boom between 1947 and 1949. This was followed by a liberal abortion law and access to family planning, implemented by the U.S. occupation and the Japanese government. By 1960, fertility stood at 2.0 children per woman, slightly below the 2.1 replacement level. Since 1973, a peak year of the baby-boom echo, another fertility decline has taken place. With a life expectancy at birth at 75.9 years for men and 81.8 years for women, and infant deaths at 4.6 per 1,000 live births, Japan now has the lowest mortality in the world. Yet, the crowded country faces social difficulties such as high costs of housing and education.

As an outcome of a steady decline in fertility, the Japanese population has been aging rapidly, prompting the government to revise its public pension system drastically in 1986. In 1991, 12.5 percent of Japanese were age 65 or older—and that proportion is expected to rise to 27 percent by 2045.

As steady low fertility squeezes the labor supply, this well-known xenophobic country finds itself increasingly dependent on non-Japanese workers to keep its economic engine going. It is estimated that the numbers of illegal foreign workers swelled from 6,600 in 1979 to 200,000 in 1989. Most foreign workers in Japan come from neighboring Asian countries, such as China, the Philippines, and Thailand. Some are descendants of Japanese emigrants to South America. Japan is now struggling to establish an immigration policy. The prospect raises a wide range of social issues, from inadequate health insurance for illegal workers to the legal problems of international marriage.

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POPULATION TODAY

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World Bank/Yosef Hadar

These little piggies go to market in Macedonia—one of the latest additions to PRB's *World Population Data Sheet.*

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FROM THE EDITOR'S DESK

With ongoing debates over child poverty, the tax burden of entitlement programs for the elderly, and intergenerational equity—it may be worth noting that this is not the first time people have pondered the riddle of intergenerational justice. For example, consider this traditional Jewish fable:

A bird once set out to cross a windy sea with its three fledglings. The sea was so wide and the wind so strong, the father bird was forced to carry his young, one by one, in his strong claws. When he was half-way across with the first fledgling the wind turned into a gale, and he said, "My child, look how I am struggling and risking my life on your behalf. When you are grown up, will you do as much for me and provide for my old age?"

The fledgling replied, "Only bring me to safety, and when you are old I shall do everything you ask of me." Whereat the father bird dropped his child into the sea, and it drowned, and he said, "So shall it be done to such a liar as you." Then the father returned to shore, set forth with his second fledgling, asked the same question, and receiving the same answer, dropped the second child with the cry, "You, too, are a liar!"

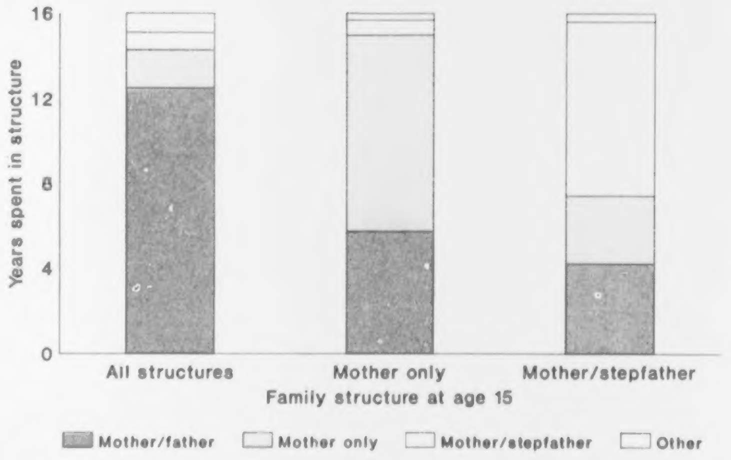
Finally he set out with the third fledgling, and when he asked the same question the third and last fledgling replied, "My dear father, it is true you are struggling mightily and risking your life in my behalf, and I shall be wrong not to repay you when you are old, but I cannot bind myself. This though I can promise: When I am grown up and have children of my own, I shall do as much for them as you have done for me." Whereupon the father bird said, "Well spoken my child, and wisely. Your life I will spare and I will carry you to shore in safety."

—Susan Kalish

Source: *The Memoirs of Glückel of Hameln*, trans. by Marvin Lowenthal, intro. by Robert Rosen, New York: Random House, 1989.

SPEAKING GRAPHICALLY

Experience of Family Structure for Children Born in the 1960s



Note: "Other" includes such family arrangements as father-only, father/stepmother, grandparents only, other relatives, adoptive or foster parents, institutional, or on own.
Source: Roger Wojktiewicz, Louisiana State University, analysis of the National Survey of Families and Households.

Here's another look at the changing American family. For children born 1960-1969, those in mother-only families at age 15 (about 15 percent of the study group) had spent on average 5.7 years with both biological parents, 9.3 years with mother only, and 0.7 years with mother and a stepfather. Those in stepfamilies (about 9 percent) averaged 4.2 years with their biological parents, 3.2 years with mother only, and 8.2 years with mother and stepfather. About 67 percent had lived with both biological parents only at age 15.

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Editor: Susan Kalish
Demographic Editor: Carl Haub
Contributing Editors: Sara Adkins-Blanch, Tom Godfrey, John F. May, Alex de Sherbinin
Consulting Editors: Thomas W. Merrick, Winthrop P. Carty, Sharon Hershey, Rhonda Smith
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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Recycled Paper

Blacks and Hispanics Poised for Increase in Congress

The minority vote will be unusually important in the 1992 congressional elections. Reapportionment and redistricting are creating new black-majority and Hispanic-majority congressional districts that could significantly increase the number of minority representatives in Congress.

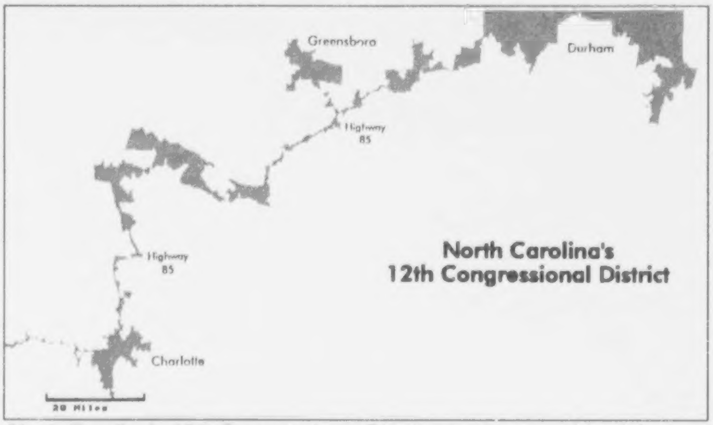
Although final district boundaries have still not been agreed upon in many states, it appears that as many as 13 new black-majority districts could be added to 1990's total of 18, and from 7 to 10 new Hispanic majority districts could be added to 1990's total of 13.

The Congressional Black Caucus, which now numbers 25, will grow by 10 to 15 members, predicts David Bostitis, senior research associate at the Joint Center for Political and Economic Studies in Washington, D.C. He thinks that the Congressional Hispanic Caucus could increase from 13 to 20 or more members.

Although minorities often vote Democratic, Bostitis points out, creating more minority districts could tend to lower the number of Democrats in Congress. This paradoxical result could occur as concentrations of minority voters (who may have previously strengthened Democratic voting blocs in several districts) are strung together into one "minority-majority" district. Under this scenario, the number of Democratic minority members could increase while the total number of Democrats in Congress decreases. As many as one in six Democrats in Congress could be either black or Hispanic, predicts Bostitis.

Population Shifts

How did the potential for such big changes in minority representation come about? For one thing, the U.S. population's continued shift toward the Sunbelt meant that the reapportionment following the 1990 Census created several new seats in states with high minority populations, points out William O'Hare, head of the Population and Policy Research Program at the Urban Research Institute of the University of Louisville. California, which has a population that is 7 percent black, almost 10 percent Asian, and 26 percent Hispanic, gained seven seats. Florida (14 percent black and 12 percent Hispanic) gained four seats; and Texas (12 percent black and 25 percent Hispanic) gained three seats. In addition to the big three, three additional states with large black populations—Georgia, North Carolina, and Virginia—each gained a congressional seat. California, Texas, and Florida are also among the top five receiving states for immigrants, who are heavily Hispanic and Asian.



North Carolina's 12th Congressional District combines residential concentrations of blacks in several cities.

Natural increase also favors growth in the minority population: white women average 1.9 children in their lifetimes, while black women average 2.4 and Hispanic women, 2.9 children.

Redistricting and Minorities

A second factor is the impact of the Voting Rights Act, amended by Congress in 1982. Under the act, passed in 1965 to combat discrimination against minority voters, jurisdictions with a history of systematic discrimination (such as a poll tax or a literacy test), must have redistricting plans "pre-cleared" by the Justice Department's Voting Rights Section before they are submitted to state legislatures for approval. For states not covered, court interpretations in the 1980s require jurisdictions to form districts with majorities of blacks or Hispanics wherever the demographics warrant it, while avoiding weakening existing "minority-majority" districts.

This approach de-emphasizes the criteria of compactness and has led to some odd-looking district maps, such as North Carolina's 12th Congressional District, which begins in Durham and follows Interstate Highway 85 southward 130 miles to pick up residential concentrations of blacks in Greensboro and Charlotte.

This is the first decade of redistricting to take full advantage of computer mapping technology. Census data available on computer tape contains information on racial and ethnic residential patterns down to the block level. Using specialized software, it is possible to quickly map out districts of different shapes and demographic composition. The Justice Department now uses similar computer technology to speed its pre-clearance evaluations.

The purpose of the Voting Rights Act is to enable minority voters—who have often in the past been subject to district configurations that minimized the effect of their numbers—to exert their political will. As a rule of thumb, a 65 percent population majority is thought to overcome the effects of a proportionally smaller voting-age population and lower rates of voter registration and turnout among minorities.

Although poor and minority groups tend to be less likely to exercise the

Continued on next page

1992 World Data Sheet Expands with New Countries

The population of Tajikistan would double in 22 years if current trends continue, while that of Ukraine would not do so in a thousand years. Lithuania's population is 3.7 million; in Croatia women live an average of 76 years, and in Bosnia-Herzegovinia, only one-third of the population is urban.

These are but a few of the new comparisons that can be made with PRB's *1992 World Population Data Sheet*, which accompanies this month's mailing to PRB members. It is larger than any previous edition, covering 195 countries in place of last year's 173 and reflects the momentous political changes of 1991-1992.

Where there once was the USSR, there are now 15 new countries whose names are gaining familiarity through the daily press. Recent editions of the *World Data Sheet* have featured several reunitings—both Germanies and the Yemens—but this one reflects breakups. As we went to press, the situation in Yugoslavia was in a state of flux. Croatia and Slovenia broke from Yugoslavia, received European Community recognition, and even sent teams to the Winter Olympics. Now, it appears other Yugoslav republics may follow a similar path.

These two situations presented novel problems to the preparers of the *World Data Sheet*: how to show these countries, or "geopolitical entities," as the footnotes phrase it. Our solution this year is to show each Yugoslav and Soviet republic separately. In the case of the former Soviet Union, there is no doubt that the breakup is a reality. Estonia, Latvia, and Lithuania have made the first and most complete break and are UN members. They are shown in their logical geographic region, Northern Europe. The remaining republics are more of a problem. Since the new Commonwealth of Independent States (which Georgia has not joined) is a loose confederation on the lines of a NATO, it seems clear they should not be listed under an umbrella group such as the "CIS."

But where to put them? Our current solution is to group the remaining 12 republics as "Former Soviet Republics." Listing both these twelve and the six Yugoslav republics individually is not meant to imply anything about their political status. This has been done for convenient reference, since so many people have called asking for demographic information on these areas.

Three other countries have been added, since it is our policy to show all UN members even if their population size is below the 150,000 cutoff point. These are San Marino, the Marshall Islands, and the Federated States of Micronesia.

Along with its larger format, the *World Data Sheet* now shows life expectancy at birth for males and females separately, an addition suggested by a user from England.

This year's world population total will be something of a shock to those who would routinely add estimated annual world increase of 93 million to last year's total of 5.384 billion. This would yield 5.477 billion for 1992. But the total this year is less: 5.420 billion. Why the difference? The results of quite a few censuses taken around 1990 are becoming available and many of the results are lower than past estimates.

The big shocker is Nigeria's November 1991 census count of only 88.5 million instead of the 120+ million previously estimated. This new count has had the demographic world abuzz since its March 20th release, particularly since the census is deemed to be of good quality. Thanks to the short production schedule of the *World Data Sheet* we were able to include this late-breaking change.

Despite some lower population totals resulting from recent censuses—for example, Brazil, Venezuela, and Thailand—the outlook for world population growth has changed little. China's reported birth rate is down slightly from last year's rate, as is India's. But India's death rate dropped as well, so that country's growth is unchanged this year. The decreases in reported census counts are minor blips in a projected total for 2025 which still rounds to 8.5 billion.

—Carl Haub

PRB's *World Population Data Sheet* is produced in French and Spanish language versions in alternating years. A 1992 French edition will be available by early summer.

The *1992 World Population Data Sheet* may also be purchased on diskette for IBM compatible computers. A set of color slides featuring 15 world maps illustrating *World Data Sheet* variables is also available, based on the 1991 edition (updates are planned for alternate years). Contact the Population Reference Bureau for ordering information.

Congressional Redistricting, *Continued from previous page*

vote than middle-class whites, this is not always the case, according to Charles Bullock of the University of Georgia. The excitement of "first-time" races tends to increase minority political participation and "outweigh the anchor of socioeconomic status." In 1983, in the Chicago mayoral contest that elected Harold Washington, the black turnout was 79 percent. It was 66 percent when Wilson Good was elected mayor in Philadelphia that year. Similar voter excitement could "pump up" the campaign of Carol Mosley Braun, who bested incumbent Senator Alan Dixon of Illinois in the Democratic primary. If Braun wins in November, the Cook County recorder of deeds will become the first black woman senator.

In addition to 1992's more favorable district demographics, there is a strong field of minority congressional candidates. Comments O'Hare: "An unprecedented number of minority elected officials took office at state and local levels during the 1980s, which created a broader base of experienced people from which to draw congressional candidates." For example, Bostitis considers black congressional candidates Eddie Bernice Johnson, a woman state senator in Texas, and Albert Wynn, a Maryland state senator, to be shoo-ins.

Although "minority-majority" districts often elect minority candidates, this is not always the case. Nor are all minorities in Congress from heavily minority districts: Alan Wheat (D-MO) represents a district that is 24 percent black; Gary Franks' (R-CT) district is less than 5 percent black.

—Susan Kalish

Macunovich To Be PRB's Visiting Scholar

Economist Diane Macunovich has been chosen as PRB's 1992-93 visiting scholar. She will be in residence from September 1992 to May 1993.

The work Macunovich will carry out at PRB is part of a larger project, undertaken with economist Richard Easterlin, to investigate trends in the distribution of economic well-being from a combined demographic and economic perspective. The project will examine how individuals influence their economic well-being through life-cycle demographic decisions, such as the formation and dissolution of unions, household living arrangements, timing and number of children, and entering or leaving the labor force.

The work will compare trends in the distribution of economic well-being with those in wage inequality, and analyze how the likelihood of being poor or well-off changes during different stages of life. The project will highlight single parents and their children, unmarried couples, and single persons under age 45, women, blacks, and Hispanics.

Dr. Macunovich is currently an Assistant Professor of Economics at Williams College, where she specializes in demographic economics and in labor economics. A prolific writer on the dynamics of demographics and economics, she received a B.Sc. from MIT and an M.A. and a Ph.D. in economics from the University of Southern California.

The Visiting Scholar Program, established in 1981 by the Andrew W. Mellon Foundation, provides a unique career-building opportunity for scholars while strengthening and diversifying PRB's research resources. PRB's 1991-92 visiting scholar is John May of the Future's Group, who has been investigating the population crisis and related policy interventions in the African country of Rwanda.

—Susan Kalish

SURVEY REPORT

Paraguay

Women in the South American nation of Paraguay are currently averaging almost 5 children in their lifetimes: the total fertility rate (TFR) is 4.7—one of the highest rates in Latin America. So reports the Paraguayan National Demographic and Health Survey (DHS) of 1990. The survey interviewed 5,827 women between the ages of 15 and 49 on reproductive and children's health issues.

The TFR for rural women in Paraguay is above six children per woman. As for many of the health and fertility indicators in the study, urban-rural differentials are large. Similarly, there are differences between better-educated and less-educated mothers, and for families living in the less-developed Northern region of the country.

When asked about ideal family size, responses averaged 3.5 children, which is the average TFR for Latin America as a whole, but smaller than actual family size. As many as 44 percent of fecund women do not want any more children, and one-fourth wanted to postpone pregnancy for more than two years.

Knowledge of family planning methods is almost universal—93 percent of women, regardless of their marital status, know at least one modern method. Seven out of ten women in union have used a family planning method and almost half of the women in union said they were using a method at the time of the survey. The most frequently used methods are the pill (14 percent), female sterilization (7 percent), the IUD (6 percent), and the contraceptive injection (5 percent). On the whole, 35 percent of the women in union use a modern method of contraception while 13 percent employ a traditional one.

Family planning needs were not being met for an estimated 131,000 women in union, equivalent to one in five women of reproductive age. Of these women, 60 percent did not want any more children and 40 percent wanted to space future births.

IDB/Carlos Conde

Shoppers in Asunción: Paraguay has one of the highest fertility rates in Latin America.

The DHS report indicates that infant mortality rates in Paraguay decreased by almost one-fourth, from 45 to 35 per thousand births between 1975-1980 and 1985-1990. Mortality among children between the ages of one and four decreased by more than half (55 percent). Most Paraguayan children are vaccinated against major childhood diseases, but only about one out of every five children (18 percent) receives the vaccines during their first year of life. About one out of every six children in Paraguay under the age of five (16 percent) suffers from chronic malnutrition.

—Sara Adkins-Blanch

The survey was carried out by the Centro Paraguayo de Estudios de Población (CEPEP) with technical assistance provided by the Institute for Resource Development (IRD) and financial support from the U.S. Agency for International Development (A.I.D.). The DHS division of the Institute for Resource Development works under contract to A.I.D. to conduct surveys in Africa, Asia, and Latin America on fertility, contraceptive prevalence, and other population issues.

DEMOGRAPHER'S PAGE

Immigration in France: Popular Perceptions Versus Reality

When demographic processes wind up as front page news, they often lose some of their precision. What seem to be subtleties of definition can lead to large misunderstandings that fuel emotional confrontations. In France, as in many European countries, immigration has become a major political issue, as the recent sharp gains at the polls made by the anti-immigrant National Front of Jean-Marie Le Pen testify.

An opinion survey taken last fall found that many French think the number of foreigners in their country is rising dramatically when, in actuality, it has changed little over the past decade. Moreover, the immigration figures (see table), that demonstrate this were published months earlier in June.

In the following article, translated from the December 1991 newsletter of the Institut National d'Etudes Démographiques (INED), Editor-in-Chief Michel Lévy attempts to set the record straight.

One problem, says Lévy, was a confusion over the number of foreign-born in France. The 1990 Census found 4.13 immigrés *(immigrants) and 3.58 million* étrangers *(foreign residents), however, 2.84 million people (*étrangers *not born in France) overlapped into both categories, producing a total of 4.87 million foreigners, not 7.71 million.*

Adding to the confusion was a gross error by a reporter over a scholarly definition: the number of foreigners in France versus a broader category, "of foreign extraction."

Compared to the United States, immigration to European countries is actually very low except in a few instances, such as Germany, and, more recently, Austria. Citizenship is difficult to obtain. (See box on citizenship requirements, on facing page, translated from the French newspaper Le Monde*).*

Table 1. Immigration and the French Population, 1982 and 1990

Citizenship category	1982 (numbers in thousands)	1990
French citizens		
By birth and naturalized (*par acquisition*) born in France	49,420	51,760
Naturalized (*par acquisition*) not born in France*	1,170	1,290
Total citizens	50,590	53,050
Foreign residents of France [*étrangers*]		
Born outside of France*	2,850	2,840
Born in France**	830	740
Total foreign	3,680	3,580
Total population	**54,270**	**56,630**

*Considered *immigrés*.

**Unlike the rules governing U.S. citizenship, children of foreign parents born in France do not automatically receive French citizenship.

A Clarification: Foreigners, Immigrants, French Citizens of Foreign Origin

by Michel Lévy

Translated from *Population et Sociétés*

The September 21st issue of *Le Figaro Magazine* reports the findings of an opinion poll of the French survey organization, Société Francaise d'Etudes par Esondages or SOFRES. The poll contained the following question: "According to official statistics, there are today in France the same number of immigrants as there were ten years ago. Do you agree?" The responses: Yes, completely agree, 4 percent; Yes, agree more or less, 3 percent; No, not really, 26 percent; No, definitely disagree, 49 percent; No opinion, 8 percent.

Preferring to recall what the "official statistics" are, rather than putting it to a public opinion poll to determine if the figures are "true" or not, several high officials have issued a clarification. These included the director of the French statistical agency, Institut National de la Statistique et d'Etudes Economiques (INSEE), former Secretary-General Marceau Long, the president of the High Council of Integration, and the director of the Institut National d'Etudes Démographiques (INED). The report showed the actual numbers of foreigners and immigrants as measured in the national censuses of 1982 and 1990 (see table). The text of this clarification of the data was widely published by the press. The relevant figures, however, had already been released by INSEE in June 1991, when the results of the 1990 census became available.

Immigrants [*immigrés*], according to the report, consist of those who were born outside France but who were resident in the country at the time of the census (including those who had become

Michel Lévy is Editor in Chief of Population et Sociétés, the newsletter of the Institut National d'Etudes Démographiques (INED)

French citizens). Immigrants who become French citizens do so *par aquisition* (by naturalization). Excluded from *immigrés* are residents born of French parents outside of "metropolitan" France (continental France plus Corsica), for example, in foreign countries or in the overseas departments and territories such as Guadeloupe or French Guiana.

The number of "immigrants" (*étrangers* born outside France plus French citizens *par aquisition*) rose only from 4.02 million in 1982 to 4.13 million in 1990—figures that do not support the notion of a rising immigrant tide. The number of foreigners (*étrangers*), that is, residents not of French citizenship regardless of birthplace, actually fell from 3.68 to 3.58 million.

The actual number of "foreigners" born outside of France but living in France fell by 10,000 persons between 1982 and 1990. According to more detailed results published by INSEE, this was due to a reduction of 180,000 (-14.2 percent) for emigrants of the eleven countries of the Economic Community (EC) and an increase of 170,000 (+10.8 percent) for those coming from countries outside of the EC.

The same issue of *Le Figaro* attributes to "official statistics" the following assertion: 14 million foreigners now reside in France." This is an astonishingly large error, in complete contradiction to the preceding data (3.6 million foreigners, 4.1 million immigrants) which cannot be accounted for by simply saying "they were missed by the census."

The number 14 million stems from the recently published work of INED's Michèle Tribalat. But this figure turns out to be the high estimate for the number of all persons living in France in 1986 who were of foreign extraction: either themselves foreign born (and of foreign ancestry) or those who had at least one foreign-born parent or one foreign-born grandparent.

Citizenship in Europe: Diverse Legislation

Translated from Le Monde, September 25, 1991

Citizenship laws are the complex products of national, and even colonial history and of the social, philosophical and political conceptions unique to each state. Therefore, diversity is the rule. On the whole, countries that generally receive immigrants have a tendency to show preference for the criteria of citizenship right by place of birth, in order to integrate new arrivals. By contrast, countries of high emigration often make kinship primary in order to maintain links with their distant compatriates. [Mother countries may also extend such ties of kinship toward the descendants of those who went out to settle colonies. In the United States, with its strong tradition of immigration, U.S. birth is the primary consideration: all children born on U.S. territory, for example, Puerto Rico or Guam, automatically receive citizenship.]

The two major rationales for citizenship are...*jus soli* ("soil law," or citizenship by virtue of one's birthplace) and *jus sanguinis* ("blood law," or citizenship by virtue of one's ancestry). Legislation varies widely from country to country:

- **Germany.** This is one of only two countries in Europe, along with Switzerland, which do not take into consideration the place of birth in citizenship requirements. To be German, it is necessary to be born of German parents or to "subscribe to German ethics." This system, which permitted justification for the annexation of Alsace, was later adapted on the return of German minorities and East German refugees since 1945. The 10,000-12,000 citizens naturalized annually are the only Germans of which nationality is the product of free will or choice. Yet naturalization is onerous: regular residence of at least 10 years, a positive attitude with regard to German culture, and knowledge of the constitution are required.

This closed conception of nationality is, however, changing with the advent of a new law for foreigners which facilitates naturalization of foreigners residing in Germany for more than 15 years. In addition, foreign children born in Germany have resident rights independent of their parents, and a right to naturalization if they have lived more than eight years in country and attend school for four or more years.

- **Switzerland.** Swiss legislation is of the German type. The candidate's respect for local customs, dialect, and participation in social life are verified at the community level. In the majority of areas it is also required to take a civic oath. Switzerland also recently eased practices by no longer demanding that citizens renounce their nationality of origin.
- **Great Britain.** For a long time British citizenship was accorded to all nationals of the British Empire on the basis of *jus soli.* Since 1981, however, citizenship has been reserved for people who have either a British parent or are born in Great Britain where one of the parents is a resident. Marriage to a British citizen does not automatically provide citizenship: a simplified naturalization procedure is required. An applicant for naturalization must have at least five years residence.
- **Belgium.** The criteria of place of birth and relationship are combined in Belgium. The foreign parents of a child born in Belgium can demand citizenship for a minor child, if one of the parents is Belgian-born. A foreigner born in Belgium can, on the other hand, request citizenship between the ages of 18 and 22.
- **Italy.** The system closely resembles that of France. Foreigners born in Italy automatically acquire nationality in three cases: fulfullment of military service; to work in a public position; or residence for 10 years from the day an individual reaches adulthood. Traditionally a country of emigration, Italy only recently introduced *jus soli.*
- **Netherlands.** Foreigners can acquire citizenship between the ages of 21 and 25 if they have always lived in the country. Place of birth is the dominant criterion, since a foreigner born in Holland is a Netherlander if his family has resided there for two generations.
- **Spain.** Historically, *jus sanguinis* dominates, with large numbers of Latin Americans having the right to Spanish citizenship if residing in the country. But the *jus soli* is applied as in France, since a foreigner born in Spain acquires nationality if at least one of his parents was born there.

Jobs and Health Insurance: The Link Weakens

As hard times force breadwinners out of jobs, their families are also losing health insurance. Employment-related health insurance covers almost two-thirds (64 percent) of nonelderly Americans, according to the Employee Benefits Research Institute's (EBRI) analysis of the March 1991 Current Population Survey (CPS). Yet, 85 percent of the uninsured lived in families headed by people with some attachment to the labor force (see figure).

- More than half (54.0 percent) lived in households where the head worked full-time, all year round.
- An additional 31.5 percent lived in families in which the head of the household worked part-time or for part of the year.
- Only 14.5 percent of the uninsured lived in households where the head did not work at all that year.
- More than half of uninsured children (57 percent) lived in homes where the head of the family worked full-time, all year round. In 1990, children made up more than one-quarter of those without health insurance (27.5 percent).

An estimated 35.7 million Americans—16.6 percent of the nonelderly population—were without health insurance in 1990. This number has been growing: up from 34.4 million in 1989 and 33.6 million in 1988. Workers and members of their families are considerably more likely to be covered by health insurance than nonworkers. However, recession-pinched employers seem increasingly less willing to cover its rapidly rising costs, according to Katherine Swartz of the Urban Institute.

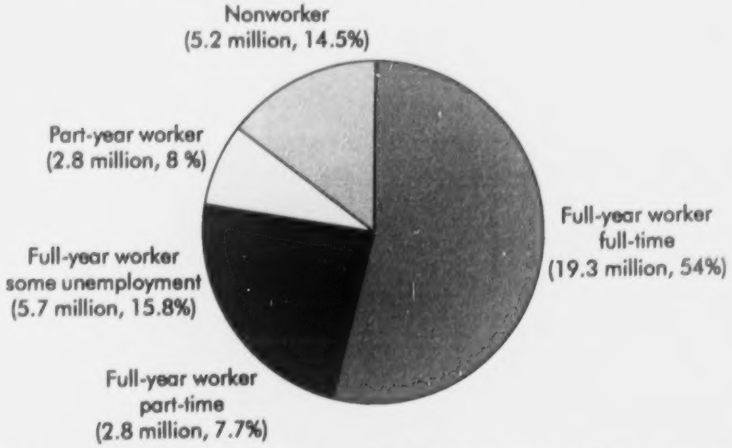
"The recession has a double-edged effect," commented Swartz. "First, people lose their jobs, become unemployed, and their families are unprotected. Second, some of the people who are 'losing' their jobs are actually being rehired again on a contract or temporary basis—with no health benefits." Yet, it is by no means certain that employers will be eager to pick up the cost burden of health insurance again as the economic climate improves.

This trend leaves some workers unprotected, since government-funded health insurance is targeted to two groups that are often outside the labor force: people age 65 and over, who are insured through Medicare; and the poor, who are insured through Medicaid.

The Working Uninsured: Who Are They?

Many of the working uninsured are employed by large firms: 35 percent in firms with 100 or more employees in 1990 (more than half of these larger firms had 1,000 or more workers). About as many, 36 percent, worked for small employers (with fewer than 25 employees) and 14 percent were self-employed. Many small employers, facing the higher administrative costs and greater risks associated with small groups, cannot obtain affordable coverage, comments the EBRI report.

Figure 1. Uninsured by Work Status of the Family Head (Excluding Elderly)



Note: Numbers do not add to total uninsured population under age 65 (35.7 million) because of rounding.
Source: Employee Benefit Research Institute analysis of the March 1991 CPS. *Issue Brief* 123 (February 1992).

Younger workers are more likely than others to be uninsured, as Swartz showed in an earlier analysis of 1987 CPS data. About one-fourth (26 percent) of uninsured workers are age 18-24 and an additional 29 percent are age 25-34. The relatively large size of the baby-boom generation (ages 22 to 40 in 1986) account for some of this concentration. It appears that some people may spend years in the labor force before getting settled in a job that provides health benefits, says Swartz.

In 1990, 39 percent of agricultural workers were not insured. Neither were 31 percent of construction or retail workers. More unexpectedly, as many as 17 percent of service workers and 7 percent of government employees also lacked insurance. Swartz's earlier analysis showed that two large employment sectors, services and retail trade, together accounted for over half of all uninsured workers.

Another at-risk group is workers with health problems, who may lose coverage. In addition, some observers are concerned that labor mobility is impeded when insurance companies deny coverage to new hires with pre-existing health conditions.

Proposals for Reform

Proposals for reforming the health system tend to fall into three groups:

- **National health insurance.** This approach would make the government the sole or chief payer of health and medical bills. Canada's health system is often held up as an example.
- **"Play or pay."** This approach would mandate that employers provide insurance and/or make contributions into a back-up risk pool.
- **Modify the existing system.** Proposals include tax credits to make insurance more affordable, vouchers for the poor, encouragements to small busi-

ness and states to form risk pools, and continued efforts to hold down costs. President Bush highlighted health-care reform in his State of the Union message in January, proposing to ease the cost of insurance through tax credits, vouchers, and deductions. The Democratic presidential candidates all took positions on the issue, with Bill Clinton backing a "play-or-pay" plan. Many observers feel ~~a~~ significant change is in the works, regardless of the outcome of the 1992 election.

—*Susan Kalish*

POPULATION UPDATE

Estimated United States Population:

As of February 1, 1992	254,283,000
As of February 1, 1991	251,584,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1084.

Estimated World Population:

As of May 1992	5,405,000,000
Annual growth	91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: November 1991

	12 months ending with November					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,123,000	4,170,000	16.3	16.6	16.1	15.9
Deaths	2,161,000	2,175,000	8.5	8.7	8.6	8.8
Natural increase	1,962,000	1,995,000	7.8	7.9	7.5	7.1
Marriages	2,370,000	2,464,000	9.4	9.8	9.7	9.7
Divorces	1,186,000	1,184,000	4.7	4.7	4.7	4.8
Infant deaths	36,700	38,200	9.0	9.1	9.7	10.0

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 40, no. 11 (1992).

Clarifying Breastfeeding's Role in Contraception

Under what circumstances can a woman rely on breastfeeding as a contraceptive method? The family planning community may be beginning to get useful answers to this question.

Pregnancy is rare among nursing mothers who have not yet resumed their monthly menstrual cycles. In developing countries, lactational amenorrhoea (cessation of menstruation linked to breastfeeding) plays a key role in birth spacing, which can have major health benefits for mothers and infants. It is also well known that the custom of nursing for extended periods can have a substantial effect on a country's fertility rates. Yet, the contraceptive protection of breastfeeding is widely regarded as unreliable for an individual woman.

In order to reconcile these two seemingly contradictory notions, the Bellagio consensus in 1989 set guidelines for the use of breastfeeding for contraceptive purposes, which was termed the lactational amenorrhoea method or LAM. The consensus stated that amenorrhoeic women who are fully or nearly fully breastfeeding are 98 percent protected from pregnancy for six months after delivery.

However, any supplement to the infant's breastmilk diet can interfere with this natural contraceptive protection, which operates through the neuroendocrine stimulus provided by vigorous and frequent suckling of the baby at the breast. This condition made it problematic to rely on LAM, since it is sometimes hard to guage the extent and effect of supplementation.

A paper recently published in the prestigious British medical journal *The Lancet* may go a long way to resolve the difficulties. The paper analyzes data on the resumption of fertility after childbirth from nine studies conducted in both developed and developing countries. It presents cumulative probabilities of ovulation and cumulative pregnancy rates based on these samples.

The authors conclude that, as a guide for women wanting to use lactational amenorrhoea for family planning, food supplementation for the infant is not as useful a sign as the return of menses. Although the two are biologically related, within six months after giving birth the return of menses is a good indicator of when to switch to other forms of family planning if desired. The study found that 3 percent of women became pregnant using LAM when the return of menses was considered the cut-off for using that method. Only 0.7 percent became pregnant if supplementation plus the returned menses marked the cutoff. However, using the more rigorous supplementation cut-off point led to higher drop-out rates from the LAM method and double protection for some women. Thus the return of menses may be viable as a solitary marker. However, education about good breastfeeding skills and weaning practices remain crucial. In addition, women should start another method of contraception immediately after menstruation resumes.

—*John F. May*
PRB Visiting Scholar

For more information, see Kathy I. Kennedy and Cynthia M. Visness, "Contraceptive Efficacy of Lactational Amenorrhoea," *The Lancet* 339 (January 25, 1992), 227-230.

TAKE A NUMBER

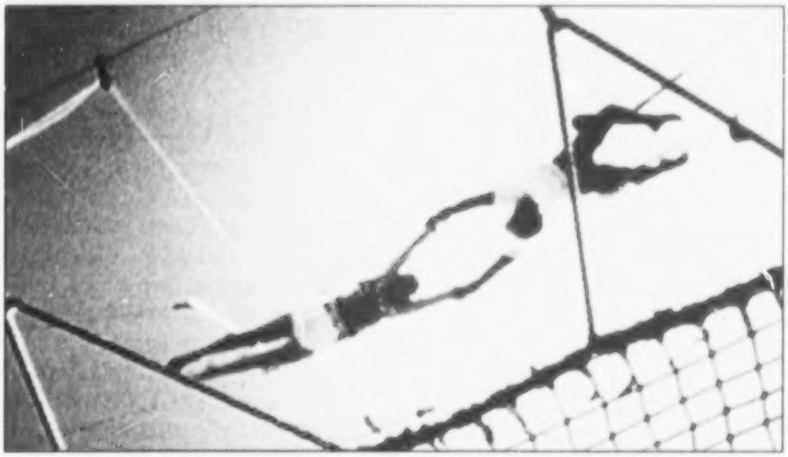
Nigeria census surprises the experts. Analysts have long suspected that the population estimates often used for Nigeria were too high, but the actual results of Nigeria's 1991 Census have stunned observers. In the absence of any reliable national census in the past, Nigeria's population was estimated at approximately 120 million. That's why the first provisional total of 88,514,501 has really turned some heads. The 1991 census, which has so far received good marks for accuracy, was designed to overcome the shortcomings of earlier attempts at enumeration in the 1960s and 1970s. If the 88.5 million number holds up, Nigeria will drop from the world's 8th largest country to 10th and the world population total will be at least 30 million less than expected. At current rates of growth, however, Nigeria will be approaching the 120 million mark before the decade's end.

U.S. immigration on the rise. The just-released *1990 Statistical Yearbook* of the Immigration and Naturalization Service reports that 656,111 immigrants (including refugees) entered the United States in Fiscal Year 1990. This is the largest number in INS statistics since 1924. The total number of those considered "immigrants" is much higher than that, however, once we add in the large numbers of illegal aliens who were legalized under the provisions of the Immigration Reform and Control Act of 1986: 823,704 aliens living here since 1982 were legalized along with 56,668 special agricultural workers. Thus, a more complete count is 1,536,483.

At last word, provisional data for Fiscal Year 1991 show that legal immigration (not including legalization of people already in the country) rose to 704,005. In 1991, the top sending country was the USSR, followed by the Philippines, Vietnam, and Mexico. In 1990, Mexico sent the most immigrants. In the current Fiscal Year, 1992, the provisions of the more liberal 1990 immigration law are in full effect, so a further increase of about one-third more people can be expected.

—*Carl Haub*

ADDENDA



Club Med ages with the baby boomers. Club Med became a symbol of sexual freedom in the 1970s and 1980s, through its well advertised luxury spas where affluent singles could mingle. Today, Club Med is retrofitting its image as the population gets older and takes on family responsibilities. A recent TV ad campaign offers "Club Med Family Vacations" where "each and every member of your family can do whatever they want." Pushing for a still adventuresome, yet more wholesome image, the new "Club Med Circus School" with its flying trapeze (above) promises the family's adolescents "something they can reach for."

New Journal, DEMOS, Launched

A new population journal, *Demos*, to be published in Warsaw, will focus on Central and Eastern Europe. According to Wladyslaw Kondrat, head of the Population Studies Center of Warsaw, Poland, *Demos* will "aim to spread knowledge of the population processes, their determinants and socioeconomic consequences," mostly in the Central and East European countries. Written in English, *Demos* will also include French and Spanish abstracts.

Demos encourages contributions from demographers, sociologists, anthropologists, epidemiologists, statisticians, economists, geographers, historians, and public policy analysts.

Contact: Wladyslaw Kondrat, Ph.D., Biuro Analiz i Ekspertyz, Ludnosciowych "Demos," Spolka Z 0.0., UL Konrada 4/95, 01-922 Warszawa, Poland.

Upcoming Conferences

- **International Conference on Population Aging.** September 17-19 in San Diego, CA. Sponsors include the Gerontological Society of America, WHO and the UN, among others.
  Contact. Conference Secretariat, University Center on Aging, College of Health and Human Services, San Diego State University, San Diego, CA 92182-0273.
- **Summer Institute in Research on Minority Aging.** August 16-22 in Warrenton, VA.
  Contact: National Institute on Aging, Bldg. 31, Rm. 5C35, 9000 Rockville Pike, Bethesda, MD 20892. Phone: 301-496-0765.

Correction

In last month's story "House Committee Debates U.S. Family Norms" (*PT*, April 1992, p. 5) it was incorrectly stated that "about 12 percent of all U.S. families with children consist of a married couple with the father in the labor force and the mother not working outside the home." In fact, 12 percent is the proportion of all *households*. The correct number for the proportion of all *families with children* should have read 33 percent, so that one-third of all U.S. families with children are of the "breadwinner-homemaker model."

CURRENT READINGS

PEACEFUL INVASIONS: Immigration and Changing America, by Leon F. Bouvier. Lanham, MD: University Press of America, and Washington, DC: Center for Immigration Studies, 1992. 234 pages. $17.50, paperback; $45.00 cloth. ISBN: 0-8191-8403-9 paperback; 0-8191-8402-0 cloth.

In this popularly written and thoughtful analysis, Leon F. Bouvier explains why he believes the United States ought to institute lower levels of immigration. The reasons for his position, which he terms a "liberal limitationist" approach, include:

- to "protect U.S. workers" from depressed wages;
- to "steer the U.S. economy toward a high-productivity trajectory so that there is more income to share with the poor;"
- to "ease the process of cultural adjustment for newcomers;" and
- to "slow down population growth," thus easing the future burden on the nation's infrastructure, environment and quality of life.

Bouvier says his position is "pro-immigrant" in that he favors policies that will foster a heterogeneous society and help immigrants to thrive. But he fears that current levels of immigration are creating economic and social conditions unfavorable to the immigrants who are admitted.

In place of the old "melting pot" ideal of an earlier era (through which newly arriving cultures are homogenized into a dominant native one), Bouvier calls for "pluralistic assimilation," in which "all...residents, of whatever background, have equal access to all avenues of success and in the process adapt to American culture while contributing to its ever changing content." Current levels, he warns, are pushing us toward a "divisive cultural pluralism."

The United States accepted more than 9 million immigrants during the 1980s, the only developed nation to approach such levels. The Immigration Reform of 1990 increased levels still further (see Take a Number, p. 10). Bouvier suggests drastic cutbacks to a level of 450,000 per year (including refugees), which, over time, would limit the total size of the U.S. population to about 316 million by 2050.

Bouvier explores the politics of immigration and traces the implications of current levels for some of the most hotly debated public issues of the day: poverty, employment, wage levels, public education, and the environment.

—Susan Kalish

APPLIED DEMOGRAPHY: An Introduction to Basic Concepts, Methods, and Data, by Steve H. Murdock and David R. Ellis. Boulder, CO: Westview Press, 1991. 299 pp. $29.95. ISBN: 0-81338372-2.

Steve Murdock and David Ellis have put together an important new book for the applied demography discipline—a comprehensive overview of materials and methods of the field. In a readable fashion it covers the major concepts, methods, and data sources, as well as the major statistical techniques used in the field, with ample examples of applications. It is a well organized text that students should find easy to use.

Murdock and Ellis review population estimates and projections, covering the basic approaches and methods. They also discuss major U.S. population trends that will have a pervasive impact in the future and ponder the future of applied demography as a discipline.

The authors do a good job of capturing the flavor of applied demographic work. For example, before launching into a description of each component of the cohort-component projection model, they quickly point out that it is the migration assumptions that are "usually the major area of consternation in population projections." The authors acknowledge that their experience lies primarily in the public sector; this background is sometimes evident in their conservative research approach, appropriate in the public policy arena, which cannot tolerate as large a level of sampling error as many business applications.

One shortcoming: this book just begs for graphics. Besides a few Lorenz curves, the only other graphic spotted in the entire book was one population pyramid. The text would also benefit from a typographic facelift—subheads to guide the reader and chapter titles at the top of each page. Even the tables appeared as though the only presentation technology available was a typewriter.

—Tom Godfrey

Books Received

Managing Health Expenditures Under National Health Insurance: The Case of Korea, by Willy De Geyndt. Washington, DC: World Bank, World Bank Technical Paper #156, 1991. 37 pp. ISBN: 0-8213-1936-1. $6.95.

Women, Work, and Child Welfare in the Third World, Joanne Leslie and Michael Paolisso, eds. Boulder, CO: Westview Press, 1989. 265 pp. ISBN: 0-8133-7805-2. $39.50.

The Health Care of the Arabs in Israel, by Nira Reiss. Boulder, CO: Westview Press, 1991. 212 pp. ISBN: 0-8133-7763-3. $29.95.

Regional and Sectoral Development in Mexico as Alternatives to Migration, Sergio Diaz-Briquets and Sidney Weintraub, eds. Boulder, CO: Westview Press, 1991. 393 pp. ISBN: 0-8133-8343-6. $46.50.

From Welfare to Work, by Judith M. Gueron and Edward Pauly. New York, NY: Russell Sage Foundation, 1991. 316 pp. ISBN: 0-87154-346. $12.95 paper.

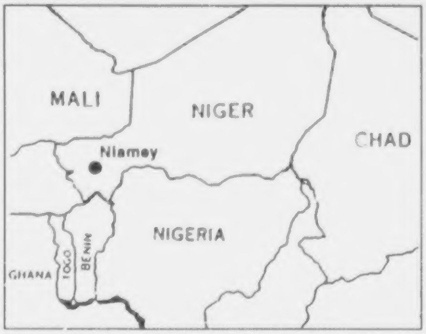
The World Bank Atlas, Washington, DC: World Bank, 1991. 29 pp. ISBN: 0-8213-1977-4. $7.95.

SPOTLIGHT

Niger

Population (1992 est.): 8.3 million
Total area: 489,190 sq. miles
Population density: 16/sq. mi.
Births per 1,000 pop.: 52
Deaths per 1,000 pop.: 20
Rate of natural increase: 3.2
Infant mortality rate: 124 per 1,000 live births
Life expectancy: 43 male; 46 female
Capital: Niamey

by Alex de Sherbinin



Located in the heart of the Sahel, a region characterized by high variability in rainfall and withering heat, Niger shares with its neighbors the distinction of being among the least developed countries in the world.

Niger's climatic variability results from its location on the northern edge of the inter-tropical convergence zone (ITCZ), an area of intense rainfall centered over the equator. The ITCZ migrates north during the summer months, and depending on how far north it travels and how long it stays, the rainfed agriculture along the country's southern border either thrives or fails.

Over 90 percent of the population works in the agricultural sector, which accounts for approximately half of its gross domestic product. Drought-resistant millet is a mainstay of production, followed by sorghum, manioc and ground nuts. In addition to sedentary farmers, Taureg and Fulani pastoral nomads tend herds of goats, sheep and cattle. The other major economic activity is mining, though it only employs a small proportion of the workforce. Nevertheless, uranium accounted for approximately 80 percent of export earnings in the mid-1980s.

The 1988 census revealed that the population of Niger doubled in just 23 years, and that half the population is under 15 years of age. This concentration of the population in the youngest age groups yields a tremendous population momentum as females in this group enter their reproductive years.

The reality of rapid population growth given the nation's meager resource base has added impetus to the development of a national population policy. The new policy, expected to be adopted soon, will address fertility reduction in the context of health and economic development. The broad objectives of the policy are to improve health and nutrition while reducing mortality and morbidity; improve the standard of living, especially of women and children; increase returns from the educational system; and improve demographic data collection and analysis. The data needs for policy and planning will be partly met by the Demographic and Health Survey (DHS) scheduled this year.

In 1988, Niger was the first Sahelian country to repeal a 1920 French law banning the sale or distribution of contraceptives. However, the family planning program has achieved only modest results. Contraceptive prevalence is approximately 15 percent in urban areas, and negligible in rural areas.

A knowledge, attitudes, and practices survey was conducted in Niamey two years after the first family planning program was established in 1984. A large proportion, 87 percent, of respondents reported a desire to use services in the future, and more than 75 percent knew of at least one contraceptive method. However, there are high levels of discontinuation due to inadequate counseling, mistrust of service providers, and real or perceived side-effects.

The Haoussa ethnic group makes up over 50 percent of the population, followed by Djerma Sonrai (20 percent), Taureg and Peulh (10 percent each), and six other ethnic groups. Over 98 percent of the population is Muslim.

Like many of its neighbors, Niger is undergoing democratic reforms. An interim government is in power and presidential elections are scheduled for the fall of 1992.

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POPULATION TODAY

Vol. 20 No. 6 June 1992

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World Bank/Yosef Hadar

Although smaller than estimated, Nigeria's population is Africa's largest and growing fast (see story, page 3).

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FROM THE EDITOR'S DESK

Los Angeles and "the disconnect." As chance would have it, the 1992 PAA conference spanned the period of the riots in Los Angeles. The controversial Rodney King verdict, which triggered the disturbances, was handed down on Wednesday, April 29, as PAAers were gathering for pre-meeting sessions. By Saturday, when PAAers were headed home, most of the bloodshed was over and the fires were down to a smolder.

Like most Americans, we were caught off guard by the violence in Los Angeles. There was a feeling of dissonance between the intense focus on demographic research in the insulated environment of the hotel and the turmoil rocking the nation's second largest city.

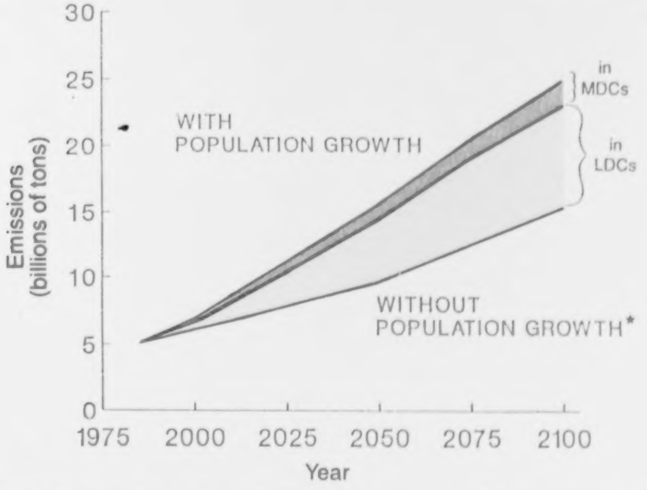
Demographers are hardly indifferent to the underlying conditions that led to the explosive reaction to the King verdict. Many of the subjects that social, economic, and family demographers have worked on in recent years had evident implications for the crisis—for example, segregation, increased economic inequality, changing composition of immigration, a changing industrial base that reduces jobs, and youth at risk of drugs, too-early pregnancy, and violent death. PAA session line-ups included titles such as "Networks, Neighborhoods, and Demographic Behavior," "Teen-Age Childbearing," "Aspects of Assimilation: Past and Present," and "Segregation and its Consequences."

Still, there was a feeling that we could do more. In a session called "Bridging the Gap Between Programs, Policy, and Academe," James Vaupel proposed an "academic marriage" between demography and policy studies. Another attendee decried "the disconnect" between demography and governance. A consensus seems to be building that population scientists can contribute to discussions of social issues—but we need to find more effective ways to get these views on the table.

—Susan Kalish

SPEAKING GRAPHICALLY

The Effect of Population Growth on Carbon Dioxide Emission (1985-2100)



Source: *Population Growth and Global Warming*, John Bongaarts, The Population Council.
*Based on hypothetical scenerio that population growth ceased in 1985.

The study of population and environmental linkages is a striking example of demography (and demographers) pushing beyond the traditional bounds of the discipline. In the 1992 PAA meeting, John Bongaarts, who did pioneering work on the proximate determinants of fertility in the 1970s, turned his hand to the determinants of global warming.

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Demographic Editor: Carl Haub
Contributing Editors: Sasha Loffredo
Consulting Editors: Thomas W. Merrick,
Sharon Hershey, Machiko Yanagishita
Director of Publications: Carol J. De Vita
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Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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Nigerian Census Surprises Experts

In November 1991, after much preparation and pretesting, Nigeria launched its long-awaited national census. Serious inflation of local counts had marred past efforts, so this census was designed to be free of political tampering. Everyone knew that population figures for Nigeria had been exaggerated for years, but no one knew by how much. The most commonly used estimates of the population ranged from 112 to 123 million for 1991, making Nigeria Africa's largest country by far.

Then the count came: 88.5 million.

In many other countries, such a low count would be greeted with hoots of derision, but this count is likely to stand as Nigeria's first and only good census. Previous attempts to count the people in Nigeria have been famous flops, a fact known to Nigerian officials and demographers alike. The failures were caused by falsification of counts for states and local areas, a type of competitive count inflation for both revenue sharing reasons and ethnic competition.

How did official estimates go so far afield? Ideally, population estimates are based on a recent, reliable census—which is why countries conduct censuses at regular intervals. Any errors inherent in a census will cause bigger and bigger errors in the population estimate as time passes.

A Careful Count

In the case of Nigeria, there was never a reliable census to begin with. Only a few other countries in the world are currently in this situation, among them, Saudi Arabia and Chad. Lebanon has not conducted a census since the 1930s.

Censuses are notoriously likely to surprise. Ethiopia's first census in 1983 showed a population total 6 to 7 million higher than expected. It is suspected that the small Asian nation of Bhutan inflated its population count when applying for UN membership in the late 1960s. The census of Bhutan that is currently underway will probably show a total of about 700,000—less than half the population that would be expected by this time had the 1960s totals been accurate.

In 1989, Nigeria decided to give census-taking another go. A National Population Commission (NPC) was created and Alhaji Sheh Musa was appointed as its head. Mr. Musa, reputed to be an able administrator, set out to avoid the pitfalls of previous counts. The independent NPC divided the country into seven census zones, each run by a supervisor who had no connection to the area either by birth or marriage.

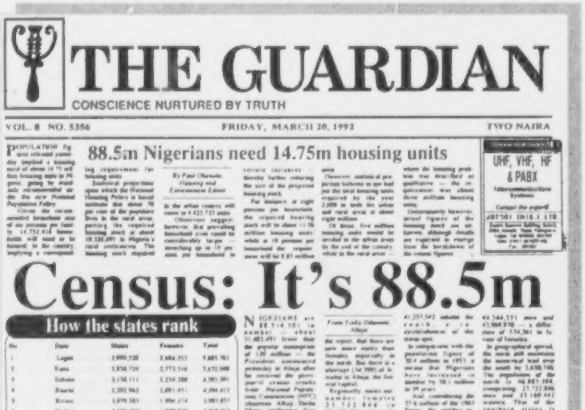
Following contemporary practice, three pretests and a rehearsal census were held. Approximately 800,000 enumerators were employed. For a three-day period at the end of last November, Nigerians were required to remain in their houses from 6:00 in the morning until 6:00 at night. As a further attempt to depoliticize the census, the distribution of government expenditures will not be based upon population. Further, no questions on ethnic group, language, or religion—much politicized topics in Nigerian society—were asked.

Will Climb to 120 Million Soon

After the initial shock of such a low count sinks in, the question remains: can this census be taken seriously? It definitely can be, despite the possible "miss" of 30+ million. Estimates have generally (but not always) been based on the 1963 Census. The next most recent census attempt, 1973, was rejected as useless by all. The 1963 count, 56 million, was itself highly suspect and past issues of the UN *Demographic Yearbook* have shown a figure of 46 million for that date.

But even that lower figure of 46 million appears too high in light of the 1991 count. The 1991 Census suggests that the true 1963 population was about 36-41 million—a figure that would be fairly consistent with an earlier 1953 count. These conclusions are based on assumed growth rates for the period from 1963 to the present.

Some observers are concerned that the dramatically smaller population size could de-emphasize population policies and family planning. In fact, the Speaker of the Jigawa House of Assembly drew just this conclusion, he stated that "Since we know there is no population explosion, I think men should marry more wives and have more children."



THE GUARDIAN

CONSCIENCE NURTURED BY TRUTH

VOL. 8 NO. 5356 FRIDAY, MARCH 20, 1992 TWO NAIRA

88.5m Nigerians need 14.75m housing units

UHF, VHF, HF & PABX

Census: It's 88.5m

How the states rank

However, at its current 3+ percent per year rate of natural increase, the population of Nigeria could easily approach 120 million at century's end.

The Nigerian government seems to be sticking to its guns, maintaining that this was an excellent census. Still, complaints from local areas are beginning to be heard. Legislators in Oyo and Osun states threatened to carry out their own count, according to the Nigerian magazine *Newswatch*. The governor of Borno state claimed an undercount, based on a good deal of migratory movement on census day, while another official complained that the implied rates of population growth of the Idoma-speaking area were far too low.

The outcome of the current controversy is in doubt, but most analysts are not expecting any immediate adjustment or attempt to recount the population. One very interesting development is in the wings: With Nigeria's upcoming election and the return to civilian government, how will this country of 88.5 million (with an estimated 45 percent of its people under the age of 15) react to the fact that it currently has a whopping 77 million registered voters?

—Carl Haub

Population-Environment Links: Advocates Find a Rough Road to Rio

As population advocates head to Rio de Janeiro this month to take part in the UN Conference on Environment and Development (UNCED)—they may be wondering if their proverbial glass is half full, or half empty.

The glass is half full because, just a year ago, it looked as if population-environment links would not be an official part of the UNCED agenda. Now the draft work program, Agenda 21, contains a chapter on "Demographic Dynamics and Sustainability," and integrates population issues in chapters on health, poverty, and the status of women.

But the glass is also half empty. Last-minute negotiations weakened the ambitious compromise between the perspectives of developed and developing countries on population-development issues, penned by Louise Lassonde of the UNCED secretariat earlier this year.

UNICEF/Sean Sprague

Poverty in developing countries and heavy consumption in developed countries both cause environmental stress.

Difficult Dynamic

At "Prepcom IV," the last preparatory meeting in New York this March, final draft language was hammered out in a small "contact group" of 12 nations—including the United States, the United Kingdom, Sweden, Norway, Finland, Colombia, Canada, Madagascar, Zimbabwe, Australia, the Vatican, and India. India represented the G-77, a group of developing countries participating in UNCED whose number has actually swelled to 128.

The G-77 held from the beginning that it would be inappropriate to talk about population growth in the Third World as a cause of environmental degradation without also targeting the much more extensive environmental damage caused by the consumption patterns of developed nations. As Prepcom IV opened, the language of Lassonde's compromise draft linked these two sets of issues.

When the United States moved to "bracket" [select for removal] language that suggested restraint of consumption as a means to ease environmental stress, the G-77 retaliated by bracketing references to population. In this deadlock, the Holy See (the Vatican) moved quickly to qualify certain references to family planning and contraception—language that had been included in similar international documents for two decades.

As a result, Lassonde's thoughtful introduction was dropped. Wording such as "demographic trends and factors" were substituted for "population." A clear call for "integrated health care, including universal access to family planning services and the provision of safe contraceptives" disappeared, and formulations such as the following were introduced: "...safe and effective reproductive health care and affordable, accessible services as appropriate for the responsible planning of family size...."

At UN meetings, nongovernmental organizations contribute to the discussion of issues, although they cannot vote. Interpretations differ on the role that women's health organizations played in the debate at Prepcom IV. Critics complained that women's groups were slowing down progress toward fertility reduction by being overly suspicious of family planning efforts. Women's health advocates countered with concerns that population control efforts were often coercive and done without sufficient regard for women's overall health and long-term status. In a recent article in the *Washington Post*, advocate Bella Abzug noted that women's organizations at Prepcom IV had, in fact, fought "to have stronger language in support of population growth concerns, access to family planning, and women-managed facilities."

Brazil to Raise Issues

Meanwhile, Brazil's President Fernando Collor announced in early May that his country plans to raise the issue of population and environment at UNCED. Brazil will "put it on the table at the summit," Collor wrote in a presidential message to the press, "but not in the narrow sense that population controls should be embraced to solve environmental problems.

"That population growth is a problem is no doubt. We need to treat it seriously and objectively. Above all, we need to stop talking only about the adverse effect of population growth and consider its causes. The primary cause is surely poverty, in which the majority of humanity persists. The poverty issue is more basic than the population explosion."

—*Susan Kalish*

PAA 1992: Denver Corrals Demographers

The glass canyons of downtown Denver were the setting of the 61st meeting of the Population Association of America, April 29th through May 2, with 1,085 attending. With an active delegation from the population organization, the International Union for the Scientific Study of Population (IUSSP)—international topics generated a special excitement this year. Population scientists shared insights and new sources of data on the emerging republics of the former USSR, the reshaping of the united Germany, migration in the Middle East following the Persian Gulf War, and the possible shift in Third World population funding being implemented by the U.S. Agency for International Development (USAID). People often outnumbered places to sit at these sessions.

As always, PAA participants presented papers on an immense variety of topics. Joel Cohen, winner of the Mindel Sheps award remarked: "I'm glad to see the spirit of looking outward in the direction of other social sciences and social issues is very much alive at this year's PAA." That spirit was strikingly symbolized by John Bongaarts, whose proximate determinants approach helped countries around the world to promote and track changes in fertility, presented a paper on determinants of global warming. Bongaart's paper projected the impact of population growth on global warming during the 21st century (see Speaking Graphically, page 2).

International Trends

In a meaty session on demographic prospects in Europe and North America, Ansley Coale (Princeton Univ.) created some lively discussion by predicting that life expectancy worldwide would not rise above 78 for males and 84 for females. Even that level would imply an infant mortality rate of only 3 per 1,000 live births (the current world average is 68 per 1,000) with almost all infant girls surviving to their childbearing years. Few people ever live to 110, he noted, saying that the process of cell regeneration simply runs its course, no matter how healthy people are. Sergei Scherbov (Univ. of Groningen, The Netherlands) noted that fertility was rising in many Muslim republics of the former USSR. Thomas Büttner (U.N. Population Div.), pointed out that the current 80 million probably represents a high-water mark in German population size.

Over the past few years, demographic factors such as migration and ethnicity triggered the biggest political changes in Europe in this troubled century, said Joachim Singlemann (Louisiana State Univ.), who chaired a session on Eastern Europe. Singlemann pointed out that demographers have pioneered in describing social change in this region. As an example of this pioneering activity, Barbara Boyle Torrey (U.S. Census Bureau) and Timothy Smeeding (Syracuse Univ.) shared preliminary data from a project monitoring social policy changes in Eastern Europe and their effect on such "vulnerable populations" as pensioners and children in Czechoslovakia, Hungary, Poland, Bulgaria, and Yugoslavia.

The World Bank and USAID, two major funding organizations for international population work have been evaluating their efforts and planning some modifications. Ellen Starbird of the USAID Office of Population presented the agency's new strategy for the 1990s (sometimes called the BIG country stategy), which attempts to target more resources to a few countries with large family planning needs—including India, Pakistan, Bangladesh, Nigeria, and Indonesia. A pre-PAA session, chaired by Ronald Ridker of the World Bank, shared some of the findings from a forthcoming analysis of World Bank population efforts in eight case-study countries. In another session, Paul Demeny (The Population Council) pushed for more attention to the "demand side" of fertility reduction—that is, for economic development, which makes having fewer children a rational choice.

Has the demographic transition from a high-fertility to a low-fertility regime gotten underway in Africa? Charles Westoff (Princeton Univ.) said the picture is mixed as far as age at first marriage is concerned, but that the educational level of women is rising. Warren Robinson (Population Council) showed there is evidence of rising contraceptive use, especially in urban areas. Douglas Ewbank (Univ. of Pennsylvania) said that the child survivor hypothesis has been oversold. It isn't so easy to bring down mortality. In an entertaining talk, Marvellous Mhloyi (Univ. of Zimbabwe) chided social

Talking and listening: Eva Tagoe takes notes (top); PAA president Etienne van de Walle, Ansley Coale, and Brian Silver chat before presidential address (bottom).

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PAA

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scientists on using figures to measure the unmeasurable—the social customs and attitudes of a society which they hardly know. He added that the military budgets of many African countries act like "black holes," consuming funds needed for programs like family planning.

The improving quality of demographic data from the world's largest country is allowing China experts to bring the Chinese experience into discussions of global demographic trends, remarked Susan Greenhalgh (Population Council). H. Yuan Tien (Ohio State Univ.) pointed out that while marriage now occurs later in China, it is still universal. In the 1950s, age at first marriage averaged 18 years for women and 20 for men; now it averages 20 years for women and 22 for men. The success of China's earlier efforts to reduce the birth rate is now producing a classic marriage "squeeze," as men seek wives among the smaller cohorts of younger women.

The War in the Persian Gulf uprooted 4-5 million people in several waves, said Sharon Russell of MIT. When policymakers reached out for information on numbers and nationalities of guest workers in Kuwait and Iraq, demographers had very little hard data to contribute, she added. Borrowing from political theory, Charles Keely (Georgetown Univ.) explained that the dynamics of the nation-state operate to create disadvantaged or oppressed groups that may resort to migration as a survival strategy.

U.S. Trends

Former Colorado Governor Richard Lamm urged that immigration to the United States be reduced. He said it is difficult enough to attend to existing poor while bringing in more. In addition, employers will never be motivated to support improved education or to upgrade jobs if the supply of cheap labor is constantly renewed. Someone asked Lamm to specify the category in which he would make the cuts: occupational preference, refugee, or family reunification? This was a tough question. After some initial skirting, the former governor named family reunification.

The rise in women's employment is the single largest demographic change in the post-World War II era, and it is strongly associated with women's probabilities of marriage, according to Valerie Oppenheimer (UCLA). Women with the weakest labor force attachment have low probabilities of marriage, those with strong attachment have moderate probabilities, and those with moderate attachment have the highest probabilities of marriage. What has been the impact of married working woman on income inequality in U.S. society? It depends, according to Maria Cancian (Univ. of Michigan). When women married to low-income men entered the workforce, it tended to decrease income inequality. However, when well-educated women married to high-income men did the same, the two-"yuppie" incomes that resulted tended to increase income disparity among families.

Jeff Grogger (Univ. of California, Santa Barbara) examined the economic consequences of unwed motherhood, noting that black women are less likely to marry after an out-of-wedlock birth. David Meyers (Mathematica) found that a woman who has a child during her teenage years is substantially more likely to be poor later on, finding a stronger effect for blacks than whites. Saul Hoffman (Univ. of Delaware), however, warned that conventional analytical methods are likely to overstate the negative socioeconomic consequences of teenage motherhood.

On the issue of child poverty, David Eggebeen (Pennsylvania State Univ.) noted that the ameliorative effects of welfare decreased in the 1980s, while the number of children receiving welfare increased. The main factor in this dynamic was the increase in mother-only families. Kathleen Harris (Univ. of North Carolina-Chapel Hill) showed that, to keep young mothers off the welfare rolls, it would be more effective to require them to get more education (for example, the GED) than to send them immediately into the labor force.

Blacks experience the most residential segregation of any racial or ethnic group, according to the 1990 Census, said Roderick Harrison (U.S. Census Bureau). This was true on all dimensions of segregation (evenness, exposure, concentration, centralization, and clustering). William Frey (Univ. of Michigan) presented evidence from the 1990 Census of continued "white flight," even as blacks suburbanize. Nancy Denton (SUNY, Albany) pointed out that increasing neighborhood concentration had the potential to increase black political power, which might in turn produce control over some additional resources for the black community.

In a session on retirement, Mark Hayward (Univ. of Southern California) urged social scientists not to equate labor-force participation rates with retirement rates, even for older males.

"Retirement is not an absorbing state like death," he said. Instead, there is much movement in and out of the labor force at ages over 65. In another session, Diane Macunovich (Williams College), who will be PRB's next visiting scholar, pointed out that baby boomers, who experience more singleness than earlier generations, tend to bounce back to their parents' homes. Also, as parents of baby boomers grow older, they will have more kin available to move in with than the cohorts that precede or follow them. Thus, many of today's "empty nests" may soon become "crowded nests."

PAAers mingle and network (top left, middle left and middle right). William O'Hare discussed segregation and redistricting (top right). PRB's Jacki Majewski shows off *Population Today* at display area (bottom left). Faye Drummond, of Senator Moynihan's staff, explained the challenge of bridging academic demography and policymaking (bottom right).

U.S. Census

Last year, the Department of Commerce wrestled with the question of adjusting 1990 Census figures for the undercount, deciding against adjustment. This year, the bureau is debating whether or not to adjust the postcensal estimates, and will decide by August 15. Stay tuned.

In a lively and significant session on the year 2000 Census, Census Bureau Director Barbara Bryant said that mail returns were down in 1990. Some members of Congress want the next census to be a stripped-down version primarily for reapportionment—a direction some other more developed countries seem to be taking. David McMillen (Senate Subcommittee on Government Information and Regulation) said the 2000 Census will cost $2.5 billion—making it a likely target for Congressional scrutiny, especially since parts of the 1990 Census were public-relations disasters. He outlined 15 possible new forms for the Census to take, from one similar to 1990 to a count largely conducted by the Postal Service (a proposal that elicited some disbelieving laughter). Katherine Wallman, executive director of the Council of Professional Associations on Federal Statistics and chair of the 2000 Census Advisory Committee, promised that possibilities will be reduced to three or four by the end of 1993.

Applied Demography

Meanwhile, technological advances such as relational data bases and geographical information systems are transforming the ability of the Census Bureau to create useful data products. An intrigued group of applied demographers gathered after an evening wine and cheese spread sponsored by Market Statistics to hear Michael J. Batutis (U.S. Census Bureau) talk on the future of U.S. small-area estimates. Estimates will become more timely, processing more controlled and much faster. "Up until now, we have used computers as overblown calculators," he said. Increasingly, the bureau will be adding more geocodes and linking data bases (for example, on phone listings, business, or car ownership, as well as population).

Following this approach, and given sufficient resources, the bureau would continually update the decennial census address file through administrative records and assign characteristics to new housing through probabilistic measures. The bureau may work toward providing detailed data products for user-defined areas that are built up from small geographic areas and even ultimately from individual housing units (although, as now, data would be only released in aggregates large enough to protect confidentiality).

AIDS Research

AIDS-related deaths have begun to whittle away at gains in life expectancy in the United States, according to Kenneth Kochanek of the National Center for Health Statistics. Between 1984 and 1989, increases in HIV deaths knocked off an average 0.2 years from life expectancy, although life expectancy still gained 0.5 years overall, due mainly to fewer deaths from heart-related conditions. One unusually emotional session, billed "Demography of AIDS in the Americas," mainly discussed women and AIDS in the United States, analyzing risk factors involved in various sexual behaviors and drug use. Discussant John Wilmoth (Univ. of California, Berkeley) critiqued that focus as putting the issue of AIDS and homosexuality on the back burner.

In a session on AIDS in Africa, it was projected that HIV infection in some countries will probably peak at about 15 to 20 percent of the adult population, with tremendous impacts on mortality and the economy. In Peter Way's projection (U.S. Census Bureau), a GDP of a severely hit country in 2015 would be about one-fifth smaller than it would have been without AIDS. In cumulative terms, AIDS could

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reduce the GDP of a typical African country by an equivalent of 1.5 years worth of total economic production. John May (The Futures Group and PRB) and John Stover (The Futures Group) projected that although AIDS will slow the rate of population growth in the hard-hit countries of Rwanda and Uganda, it will not cause population size to decline unless fertility would drop sharply.

UN Population Conference, 1994

The International Union for the Scientific Study of Population (IUSSP), PAA, and other groups of professional demographers can play a useful role in the upcoming 1994 United Nation's population conference. However, said Michael Teitelbaum (Sloan Foundation), demographers will have to "force themselves to cross a great cultural divide" to reach policymakers and the press with their insights. But Massimo Livi-Bacci (IUSSP) warned against attempting to be too prescriptive. "The message has to be simple and clear. But this is contradictory to the role of science, which is to raise doubts, not give ready answers to complex questions." Rather, he said, IUSSP should provide a forum for discussion and interchange.

Steven Sinding (Rockefeller Foundation) said that foundations with an interest in this area will fund an independent international commission to augment the UN conference. Sinding named several issues he felt will be important:

- Is rapid population growth and change really an urgent matter, given the downplaying of this issue by cautious analysts?
- Should interventions to reduce fertility be justified on grounds of improving the health of women and children, slowing population growth, or both? (Women's groups in developing countries are pushing this issue to the fore.)
- What are the roles of family planning and development in reducing birth rates?
- What impact will aging have in China, Japan, and other Asian countries that experienced rapid fertility transitions?

The "hottest issue," Sinding predicted, will be international migration into more developed countries.

Awards Night

In a lively presidential address, Etienne van de Walle discussed the notion of child "numeracy"—that women have an idea of how many children they want—as a litmus test of the beginning of fertility decline. He placed numeracy in the context of classic fertility transition theory and presider Ansley Coale's 1973 formulation that fertility decline can only occur when reproductive decisions lie within the "calculus of conscious choice."

"Because the concept appears so obvious, we include questions on desired family size in our fertility surveys. We are aware, of course, that there may be problems with the question, such as *a posteriori* rationalization. Nonetheless the World Fertility and Demographic and Health Surveys think nothing of asking the following complex mental puzzle: "If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? The question works generally, but not in certain contexts. In the 1987 DHS of Mali, for example, nonnumeric responses (such as "up to God") were given by one fourth of the women."

Fertility surveys repeated in countries over time show that the concept of numeracy has at least a foothold almost everywhere, said van de Walle. He sketched a similar evolution of ideal family size in Europe by quoting from European writers such as Saint-Simon, Balzac, and Jane Austen, and showed family portraits and genre paintings from the 17th and 18th centuries to illustrate the historic appearance of norms for family size.

John Casterline presented the Dorothy Thomas Award to Martin Brockerhoff (USAID). The Mindel C. Sheps Award for mathematical demography, presented by Kenneth Manton, went to Joel E. Cohen.

—PRB staff

Daily Pasta, at Market Price...

If many 1992 PAA attendees had a sense of *deja vu*, it could have been because the Radisson Hotel was also the site of the 1980 PAA, only the hotel was then the Denver Hilton.

The setting was a hospitable one as participants availed themselves of the local cuisine, from buffalo steak to prairie oysters to enchiladas to Duffy's famous $3.75 complete breakfasts. Finnigan's, a sandwichery located in the same building as the Radisson, surprised us with its menu that offered at "market price"—not ocean fish—but "daily pasta."

On Saturday morning participants in the 14th Annual Fun Run jogged several circuits around the nearby state capitol grounds.

Evidence of "the disconnect" between academic demography and the policy environment, as overheard in the elevator: "When I advised her to totally revamp her presentation to Congress, to boil it down to one page, using bullets—she was appalled."

Most arresting paper title: "Testosterone and Men's Marriages."

Most unusual luncheon session topic: "Demography of Left-Handedness."

Mathematical demographer Joel Cohen produced not one, but two, demographic jokes in accepting his award.

What did the only mathematical demographer in Transylvania forget to do? *Count Dracula.*

Cohen also asked: What is the difference between a flat tire and 365 condoms? *A flat tire is a Goodyear; 365 condoms is a great year.*

More?

Former Colorado Governor Lamm quipped that demographers can prove statistically that the average person in Miami is born Cuban and dies Jewish.

New internal acronym now in use at the Census Bureau: "2KS," which simply means, staff working on the 2000 Census.

On Friday, urban disturbances in many cities following the Rodney King verdict in Los Angeles touched even the placid population conference. A group of high school students in Denver walked out of school, causing some jitters in the city. From the podium following the presidential address, we were warned about venturing into the streets. Most went out anyway and Denver was (happily) quiet.

Big complaint: Very few papers were available at meetings. Most had handouts, but almost never enough to cover even small rooms.

Pre-PAA Meetings

Population Librarians Meet

The "inextricable link" between population and the environment was the theme of the pre-PAA meeting in Denver of the Association for Population/Family Planning Libraries and Information Centers, International (APLIC). Keynote speaker Hugo Hoogenboom (Association for Voluntary Surgical Contraception) said that the current "romance" between the two movements must become a lasting marriage to provide a chance for human survival. Staff of member libraries swapped information on useful materials, such as environmental online data bases (such as TOXLINE and ENVIROLINE), videos, and publications. This 25th meeting marked a quarter century of shared activity among libraries and information centers in this field.

Psychosocial Aspects of Family Planning

Sixty-five psychosocial experts celebrating the 20th pre-PAA Psychosocial Workshop saluted pioneer Henry David (Transnational Family Research Institute) as the workshop's founding father. The annual two-day gathering attracts researchers focused on individual aspects of population behavior. Also a draw, participants agreed, is the friendly, one-session-at-a-time style reminiscent of the early PAA meetings as recalled nostalgically by PAA old-timers.

This year's workshop, organized by Susan Palmore (Family Health International) and Larry Severy (Univ. of Florida), featured overview presentations and lively debate on abortion, contraceptive use, fertility decision making, and adolescence, as well as AIDS. Seventeen participants gave five-minute updates on their ongoing research.

Participants agreed that AIDS, which spreads mainly through sexual contact, has complicated family planning work. One particularly tough issue: Programs often promote condom use as a contraceptive and to prevent sexually transmitted diseases (including AIDS). But how effective can the condom strategy be in cultures in which women's status relies very heavily on childbearing?

Upcoming Conferences

National Center for Health Statistics (NCHS) data users conference is scheduled for August 5-7, in Bethesda, MD. There is no registration fee, but advance registration is requested.
Contact Barbara Hetzler, Conference Management Staff, NCHS, Room 1100, 6525 Belcrest Road, Hyattsville, MD 20852. Phone:(301)436-7122.

"Geography is Discovery" is the theme of the 27th **International Geographical Congress**, to be held August 9-14, in Washington, DC.
Contact: Dr. Anthony de Souza, Secretary General, 27th International Geographical Congress, 1145 17th Street, NW, Washington, DC 20036. Phone:(202)828-6688, Fax:(202)775-6141.

The annual meeting of the **American Sociological Association** will be held August 20-24, in Pittsburgh, PA. This year's theme is "Sociology and the Reconstruction of Society."
Contact Janet Astner, ASA, 1722 N Street, NW, Washington, DC 20036-2981. Phone: (202)833-3410.

Santo Domingo, Dominican Republic will be the site of the **National Council for Geographic Education**'s annual meeting, to be held September 23-26. Theme: "Exploration, Discovery, and Impact."
Contact: National Council for Geographic Education, Indiana University of Pennsylvania, Leonard 16A, Indiana, PA 15705-1087. Phone:(412)357-6290, Fax:(412)357-7708.

The **Southern Demographic Association** will hold its 1992 meeting from October 15-17, in Charleston, SC. The deadline for submission of abstracts, papers, or panel ideas is June 30.
Contact: Dr. William O'Hare, Population and Policy Research, University of Louisville, Louisville, KY 40292. Phone: (502)588-6626, Fax:(502)588-7386.

POPULATION UPDATE

Estimated United States Population:

As of March 1, 1992	254,480,000
As of March 1, 1991	251,779,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1086.

Estimated World Population:

As of June 1992	5,412,000,000
Annual growth	91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1991

	January — December					
	Number		Rate			
	1991	1990	1991	1990	1989	1988
Live births	4,111,000	4,179,000	16.2	16.7	16.2	15.9
Deaths	2,165,000	2,162,000	8.5	8.6	8.7	8.8
Natural increase	1,946,000	2,017,000	7.7	8.1	7.5	7.1
Marriages	2,371,000	2,448,000	9.4	9.8	9.7	9.7
Divorces	1,187,000	1,175,000	4.7	4.7	4.7	4.8
Infant deaths	36,500	38,100	8.9	9.1	9.7	9.9

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 40, no. 12 (1992).

The Reader's File

Toward sustainable development. Providing educational opportunities can decrease fertility rates, improve health care, and increase use of family planning methods, according to the UNFPA's 1992 report. Developing human resources is an emphasis of this year's report which is subtitled "A World in Balance." It advocates the goal of balancing population, development, and sustainability, and calls for human-centered development. It also provides demographic and social indicators for world countries.

The State of World Population: 1992, United Nations Population Fund. New York: UNFPA, 1992. 220 East 42nd Street, New York, NY 10017. Phone: (212) 297-5026. 46 pp. Cost: free.

Measuring income inequality. Inequality in the distribution of income in the U.S. increased between 1969 and 1989, according to a report issued by the Census Bureau. The report introduces a new measure, relative income, designed to allow comparisons of income distribution over time. The new indicator, which adjusts the income of an individual for family size, measures individual incomes relative to median income. According to the Census Bureau, "relative income is intended to supplement information available from such traditional measures as median family income and the percent of the population below the poverty line."

Trends in Relative Income: 1964-1989, U.S. Census Bureau, Series P-60, No. 177. Washington, DC: GPO, Dec. 1991. Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Phone: (202) 783-3238. 103 pp. Cost: $5.00.

Whose decision? Only three states and the District of Columbia have statutes that permit a minor to obtain an abortion without her parents' knowledge or consent, according to a report prepared by the Alan Guttmacher Institute. The study reviews and compares state laws concerning parental consent to have an abortion and a minor's right to make other decisions such as getting married, dropping out of school, or placing a child for adoption. The report finds a wide discrepancy between state laws.

Our Daughters' Decisions, by Patricia Donovan. New York: The Alan Guttmacher Institute, 1992. 2010 Massachusetts Ave., NW, Washington, DC 20036. Phone: (202) 296-4012. 35 pp. Cost: $10.00.

TAKE A NUMBER

Demographic "State of the Nation, 1992." A new Census Bureau summary of U.S. population trends shows that the number of U.S. households is growing more slowly and that, as a nation, Americans are poorer than they used to be. The report summarizes the latest data from a variety of Census Bureau reports issued since 1991.

The number of households increased from 63.4 million in 1970 to 94.3 million in 1991. But, the annual rise in the 1980s was only 1.2 million, compared to 1.7 in the 1970s. Credit that development to the baby boom aging past the time of first household formation.

Poverty is up and median family income down. Based on money income, the poverty rate rose from 12.8 percent in 1989 to 13.5 in 1990. Blacks have the highest poverty rate, 31.9 percent, which remained unchanged from 1989 to 1990. Family income declined from 1989 to 1990, the first drop in 8 years. By 1990, the median family income was $35,350, a 2 percent decrease from 1989.

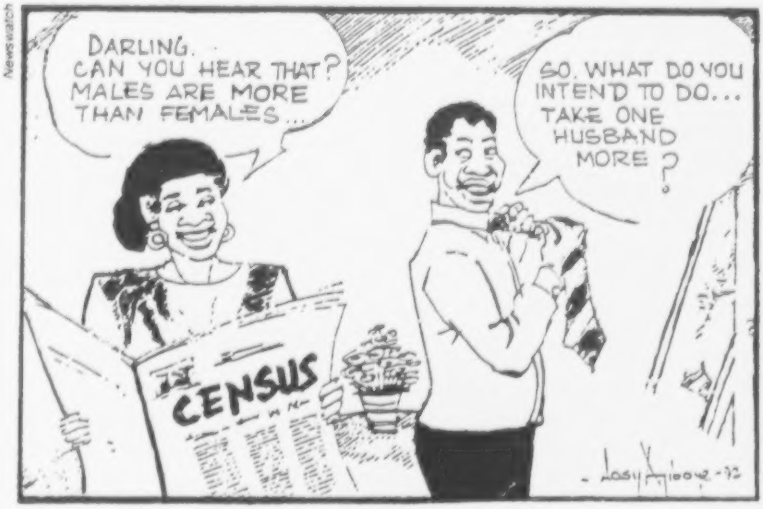
Even as a presidential election approaches, Americans are showing a reduced tendency to vote. Only 45 percent of the voting-age population actually went to the polls in November 1990, down from 49 percent in 1982. Only 20 percent of those age 20-24 voted in 1990.

It's no surprise that computer usage is on the rise. In 1989, computers were present in 15 percent of U.S. households. Nearly half of those in the 3 to 17 age group use a computer at home or school, while 28 percent of those over age 18 use one at home, school, or work.

Out-of-wedlock births continue to rise. Among women age 20-24, 29 percent of first births were outside marriage, more than double the proportion for 1960-1964. And, the age at marriage continues to go up. In 1991, the median age at first marriage was 24.1 for women compared to 22.0 in 1980. For men, it was 26.3 in 1991, up from 24.7 in 1980.

—*Carl Haub*

ADDENDA


Newswatch
DARLING. CAN YOU HEAR THAT? MALES ARE MORE THAN FEMALES...
SO, WHAT DO YOU INTEND TO DO... TAKE ONE HUSBAND MORE ?
CENSUS
Josy Ajiboye -92

What? More males than females in Nigeria? Nigerians were surprised by this finding from the recent census, since a supposed excess of women had been sometimes cited as a rationale for men taking multiple wives. (Actually, the census showed more boys than girls, but agreed with folklore that there are more women than men.)

CURRENT READINGS

EDGE CITY, by Joel Garreau. New York: Doubleday, 1991. 546 pages. $22.50 hardbound. ISBN 0-385-26249-3.

Everyone interested in the study of population probably has an opinion about "edge cities"—those economic and social centers with identities of their own, growing up on the outskirts of major metropolitan cities. To some they represent homogenized, suburbanized versions of "real" cities, to others they represent the loci of growth, new ideas and vitality. Joel Garreau may not change your opinion, but he gives you much to think about regarding how and why these centers develop.

As a reporter for the *Washington Post* and author of *The Nine Nations of North America*, Garreau takes a reporter's perspective and admits up front that *Edge City* is not a theoretical work. The book is largely anecdotal and is written in a series of case studies of nine major metropolitan areas—Northern New Jersey, Boston, Detroit, Atlanta, Phoenix, Texas, Southern California, San Francisco, and Washington, D.C. Garreau defines an edge city as "any place that: 1) has five million square feet or more of leasable office space—the workplace of the Information Age, 2) has 600,000 square feet or more of leasable retail space, 3) has more jobs than bedrooms, 4) is perceived by the population as one place, 5) was nothing like a city as recently as thirty years ago."

Each chapter discusses a particular aspect of edge cities, including economic development, government, geographic placement, and social interaction. The author documents how we came to where we are today in the emergence of edge cities, including the roles of the developers and the urban planners. He described the clash of values between developers and preservationists.

Edge Cities is provocative reading in an easy style. While clearly of interest to human ecologists, it is not written in the style of this tradition and, in fact, has few demographic statistics. However, it provides readers with a thoughtful overview and suggests further studies of edge cities in a more systematic vein.

—Barbara O'Hare

STATE OF HISPANIC AMERICA 1991: An Overview, National Council of La Raza. Washington, DC: NCLR, 1992. 35 pages. $5.00.

This first in an intended series of annual reports by the National Council of La Raza (NCLR) evaluates the status of the U.S. Hispanic community. Currently numbering 22.35 million people, according to the report, the Hispanic community is one of the most rapidly growing minority populations in the country—expected to become the largest U.S. ethnic minority by the turn of the century, if current rates of growth persist.

State of Hispanic America 1991 reports on the demographics, education, poverty, health, and civil rights experience of this diverse and potentially influential group. Among its findings:

- Hispanics have the lowest levels of educational attainment of any major population group.
- Hispanics are far more likely than blacks or whites to be uninsured, largely because they work in industries and occupations which are least likely to provide health benefits.
- Hispanics suffer from substantial levels of discrimination in education, employment, and housing.

Hispanics are a diverse group. For example, although 25 percent of all Hispanic families lived in poverty in 1990, poverty rates vary by nationality. While 37.5 percent of Puerto Rican families lived in poverty, Mexican-American (25.0), Central and South American (22.2), and Cuban-American families (13.8) fared better.

In a section on policy implications, the report urges the adoption of government programs that reward work—policies that would benefit the "working poor" (high labor force participation rates, but low wages), within whose ranks Hispanics are heavily represented. By focusing solely on the unemployed, the report says, current federally funded programs "diminish the value of work."

—Sharon Hershey

Books Received

State Rankings 1992: A Statistical View of the 50 United States, by Kathleen O. Morgan. Lawrence, KS: Morgan Quitno Corporation, 1992. 459 pp. ISBN: 0-9625531-2-3. $39.95

Population: An Introduction to Concepts and Issues (5th ed.), by John R. Weeks. Belmont, CA: Wadsworth Publishing Company, 1992. 579 pp. ISBN: 0-534-17346-2. $40.95.

Analysis with Local Census Data: Portraits of Change, by Dowell Myers. San Diego, CA: Academic Press, 1992. 369 pp. ISBN: 0-12-512308-6. $42.50.

Earnings, Occupational Choice, and Mobility in Segmented Labor Markets of India, by Shahidur R. Khandker. Washington, DC: World Bank, Discussion Paper #154, 1992. 45 pp. ISBN: 0-8213-2062-9. $7.95.

Beyond the Limits: Confronting the Global Collapse, Envisioning a Sustainable Future, by Donella H. McDowell, et. al. Post Mills, VT: Chelsea Green Publishing Co., 1992. 300 pp. ISBN: 0-930031-55-5. $19.95.

An End to Hunger: The Social Origins of Food Strategies, by Solon L. Barraclough. Atlantic Highlands, NJ: Zed Books, 1991. 284 pp. ISBN: 0-86232-993-0. $19.95.

SPOTLIGHT

Russia

Population: 149.3 million
Land area: 6,592,800 sq. miles
Births per 1,000 population: 14
Deaths per 1,000 population: 11
Rate of natural increase: 0.2 percent
Total fertility rate: 1.9
Infant mortality rate: 30 per 1,000 live births
Life expectancy (male/female): 64/75

by Sasha Loffredo & Susan Kalish

LATVIA
ESTONIA
BELARUS
Moscow
UKRAINE
RUSSIA
KAZAKHSTAN
CHINA

About twice the geographic size of the United States, Russia's 6,592,800 square miles span 11 time zones across two continents. It is the world's largest country and the sixth most populous, with 149 million residents.

Ethnic Russians make up 80 percent of the population, with 5.5 million Tatars, 4.4 million Ukrainians, and a million or more each of such ethnicities as Chuvash, Dagestanis, Bashkirs, Berussians, Chechen-Ingush, and Mordovians, along with smaller groups. Over 25 million ethnic Russians reside in other former USSR republics such as Ukraine (11 million) and Kazakhstan (6 million), and could pose a resettlement problem if events should prompt them to relocate within Russia.

Extending north to the Arctic Ocean, east to the Pacific, and west into Europe, Russia has an extremely diverse climate. In Siberia, winter temperatures can fall as low as -95°F. In contrast, the southern region is mostly desert, and summer temperatures soar above 120°F. Russia's most habitable climate and highest population densities are found west of the Urals. About three-fourths of Russians are urban dwellers.

Russia's agriculture labors under an extremely short growing season, unreliable rainfall, and poor soil. Still, in the 1980s, it produced more than half of the former Soviet Union's grains and potatoes and 43 percent of its other vegetables. Siberia contains a wealth of natural resources, with half of the world's coal and natural gas, and more oil reserves than Saudi Arabia.

Heavy industry and raw materials dominate the economy. Russia made half or more of the Soviet Union's steel, cars, cement, electricity, and paper. The industrial infrastructure (mostly oriented to defense), is considered inefficient by world standards.

For Russia, as for other former Soviet Republics, population data are beginning to become more available (see *PT*, December 1991). The infant mortality rate, officially 17.8 infant deaths per 1,000 live births, is actually about 30. The discrepancy is due to differences in how Russia defines infant death. Life expectancy compares poorly with Western Europe's 73 years for men and 79 years for women. Like other more developed countries, however, Russia is an aging society. The total fertility rate (TFR, or average lifetime births per woman) is below replacement level at 1.9, which is the average for Eastern Europe. Only an estimated 22 percent of women in Russia use modern contraceptives. Reliance on abortion is quite high, officially estimated at 3.5 abortions in a woman's life. The rate of natural increase, is low—only 0.2 percent per year.

Having dominated the USSR economically and politically since its beginnings in 1922, Russia last fall became one of the initial three signatories of the emergent Commonwealth of Independent States. Russia's economic relationship with the former republics of the USSR is as much in flux as the economy of the country itself.

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Grim Reaper
Stork

Children dip into population issues, using PRB learning materials (see page 6).

PRB A publication of the Population Reference Bureau, Inc.

FROM THE EDITOR'S DESK

Population education is featured in this summer issue of *Population Today*.

The Demographer's Page, our "centerfold" feature (starting on page 6), was written by Kimberly Crews, head of PRB's Population Education Program. It explores some approaches to teaching population issues and demographic concepts at the elementary, high school, and college levels.

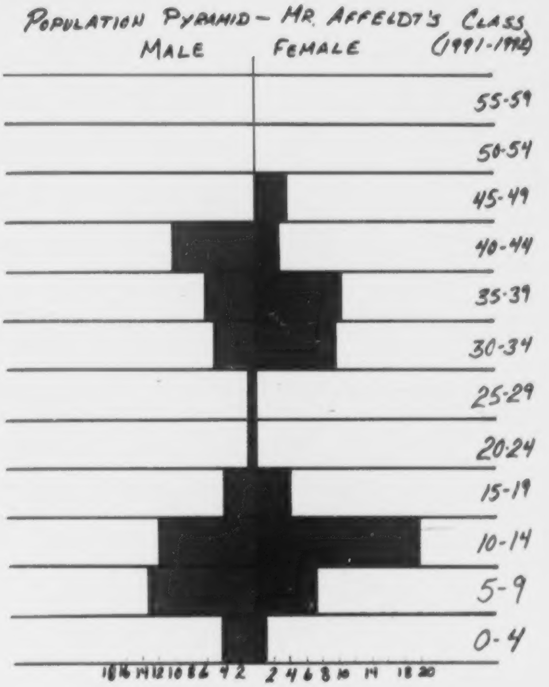
This issue also features a description of PRB's population education activities (page 8), a list of conferences where PRB will present teacher training workshops (page 9), and suggestions for texts and audiovisual teaching materials (page 12). Carl Haub's usual column, Take a Number (page 10), is devoted to *World Population Facts,* a simplified version of PRB's *World Population Data Sheet,* from the *CONNECTIONS* program designed for elementary school use. In Speaking Graphically (below), we illustrate the kind of population graphs children can create.

Today, demographic concepts and population issues are being presented far earlier than the traditional college and graduate school levels. These concepts highlight the human condition and explain the dynamics of human change. They are a remarkable tool to help young people understand an increasingly interdependent world.

With the September issue, *Population Today* will be back to its usual content mix—but with a new look. The September issue will introduce a new design that will make *PT* even more readable and easy to use. We are excited about the new look, and hope you will be too.

—Susan Kalish

SPEAKING GRAPHICALLY



A fourth grade class in Lodi, Wisconsin, displays the results of a census of its households. The overall barbell shape of the population pyramid results from a dearth of relatives in their 20's and a young age cut-off (ages 45-49) in the families of these 10-year-olds.

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Editor: Susan Kalish
Demographic Editor: Carl Haub
Contributing Editors: Sara Adkins-Blanch, Kimberly Crews, Alex de Sherbinin
Consulting Editors: Thomas W. Merrick, Sharon Hershey, Machiko Yanagishita
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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* Educators, students, and seniors should send supporting documentation

Recycled Paper

Multiculturalism Grows, but Segregation Lingers

The 1990 Census produced the most detailed data on race and ethnicity in decades, and got it out much faster than earlier censuses. Two major messages emerge. First, all evidence confirms the growing trend toward multiculturalism in the United States. Second, residential segregation of U.S. blacks has remained basically unchanged for two decades.

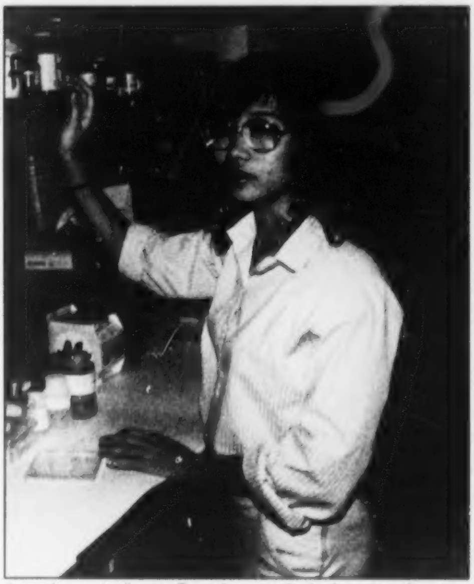
Early figures on the population by race and Hispanic origin reveal a growing U.S. diversity: the number of Asian/Pacific Islanders doubled, growing from 3.5 million to 7.3 million since 1980. The black population increased 13 percent, from 26.5 million to 30 million. People identifying themselves as American Indian, Eskimo, or Aleut increased from 1.4 million to 1.9 million. The number of whites (including Hispanic origin) also grew, but at the slower rate of about 10 percent, from 188.4 million to 199.7 million. In addition, people of Hispanic origin grew dramatically from 14.6 million to 22.4 million.

In May, the bureau released information from the "long form" of the 1990 Census (which is administered to approximately one out of every six households). The long form contains information on social characteristics, including language group, ancestry, foreign birth, and date of arrival for immigrants. The census found that about one out of eight people in the United States (31 million people) speak a language other than English at home. Of these, 17 million speak Spanish, 4 million one of the Asian languages. Almost half of those who speak another language at home reported that they don't speak English "very well."

The number of foreign born residents is at an all time high: 20 million, which is just under 8 percent of the population. Almost half of these are recent arrivals, who entered the United States since 1980.

These immigration-fueled trends almost certainly are continuing, since the Immigration Reform Act of 1990 further liberalized immigration.

The May figures also showed ancestry in terms of ethnic origin. Most commonly reported were German (58 million), Irish (39 million), English (32 million), Italian (15 million), and United States or American (13 million).


UNHCR/P. Théard

Immigrants from Southeast Asia boosted multiculturalism in the 1980s.

"Heinz 57" or "NOYB"

All these figures provide different perspectives on the emergent multicultural trend. They also illustrate the hazards of submitting the untidy phenomenon of human ethnicity to any neat, logical classification system. Concepts such as race, ethnicity, national origin, ancestry, and native tongue often overlap. For example, "chicanos" from New Mexico, "latinos" from California, immigrants from Spain, black Cubans, Pacific Islanders from the Philippines, and their descendants might all designate themselves as "Hispanic origin."

In addition, many Americans seem to identify with a different set of ancestors at different times. Between 1980 and 1990, for example, the tendency of persons to report "English" ancestry declined, but rose for "German" ancestry, as Nampeo McKenney of the Census Bureau reported to a joint Canada-United States conference on the measurement of ethnicity held in Ottawa this April. A substantial portion of the rapid rise in the American Indian population over the past few decades (38 percent between 1980 and 1990) is due to new decisions to identify oneself as such. A greater willingness to designate oneself as belonging to a certain race, ethnicity, or ancestry may reflect consciousness raising among the group, an upsurge in media attention to that group, adoption of affirmative action policies by government or industry, or simply the order in which examples are listed in the questionnaire. ("German" led the list of examples in 1990.)

The Census Bureau uses a self-identification approach to race and ethnicity. Susan Lapham reported to the Ottawa conference that the bureau used 630 different computer codes to accommodate the many different self-characterizations of ethnicity that people wrote in, beyond categories printed on census forms.

Sometimes census categories confuse, or even annoy respondents. Answers received to the questions on race, Hispanic origin, and ancestry include "mixed," "a little of everything," "a fine blend," "Heinz 57," "exotic hybrid," "adopted," "child of God," "None Of Your Business," or, more briefly, "NOYB."

Hispanics have particular difficulties answering the race question, since many do not personally identify with any of the racial designations (white, black, Asian/Pacific Islander, or American Indian/Eskimo/Aleut) and do not automatically make the distinction between race versus the ethnicity of Hispanic origin. The bureau estimates that in 1990, over 40 percent of Hispanics thus checked off "other race." This apparent failure of the current racial self-definition scheme made it appear that "other race" outnumbered Asians

Continued on next page

Multiculturalism,
Continued from previous page

in California, Texas, New York, Florida, and several other states.

The Census Bureau collects information on race to fulfill legislative mandates, federal program requirements, and to satisfy the information needs of researchers, marketers, or the press. The nature of immigration flows, political pressure from emerging groups, and the costs and benefits of collecting detailed information enter into these decisions. The Office of Management and Budget has the final say. The question on Hispanic origin was first included on the long form in 1970 and asked of every household in 1980. "Vietnamese" and "Asian Indian" were added as detailed Asian categories in 1980. The bureau has received considerable pressure to add a "mixed race" category to the 2000 Census to indicate the offspring of biracial parentage and is considering this issue.

The categories used in government questionnaires can forge new identities. This seems to have happened with government school attendance surveys that collect racial and ethnic data. Filling out these forms taught millions of people of Cuban, Mexican, Salvadoran, and other national origins to describe their children as "Hispanic." Summary categories used by the Census Bureau for reporting ancestries may also help create ethnic identity, for example "Arab" (not Egyptian or Palestinian) or "sub-Saharan African" (which may require more geographical sophistication than many of the public can muster).

Persistence of Segregation

Analyses on racial segregation of housing—not performed on the 1980 Census until mid-decade—are already available.

"One main fact stands out," Roderick Harrison of the Census Bureau told *Population Today*. "The rate of change is such that, if you thought segregation was a problem in the 1970s, the numbers would say that it still is. The data show declines in most measures for blacks in residential segregation, but the declines are marginal."

As found in earlier censuses, "black segregation is the highest, and is of a different order of magnitude. All changes over the past 20 years barely put a dent in those big differences," Harrison also noted.

This analysis provides data for 254 U.S. metropolitan areas in three size groupings, and for 15 of the most segregated metro areas. The analysis is a sophisticated one, incorporating 19 measures (grouped into five dimensions) compiled by sociologists Douglas Massey and Nancy Denton in a 1988 study of segregation in 60 U.S. cities. The dimensions include evenness (distribution of two populations across geographic areas being compared), concentration, exposure (likelihood of a member of one group encountering a member of another group), clustering (compactness of residential enclaves of a concentrated minority group), and centralization within an urban area.

According to Harrison, blacks are the most segregated ethnic group for all measures (with the possible exception of clustering for American Indians). Next, on measures of evenness, exposure, and clustering, are Hispanics. Asians are more segregated than American Indians, except for clustering.

It is unclear, said Harrison, how much of today's segregated housing patterns is caused by exclusion or discrimination and how much by personal choice or preference on the part of minority group members. Still, a recent study conducted by the Urban Institute for the Department of Housing and Urban Development found racial "steering" and other informal discriminatory mechanisms at work in the real estate market.

—Susan Kalish

Segregation data for 254 U.S. metro areas is available on disk, as is a copy of the paper, *Racial and Ethnic Residential Segregation in 1990*, by Roderick Harrison and Daniel H. Weinberg. No charge. Contact Roderick Harrison, U.S. Census Bureau, Washington, DC 20233, (301) 763-2607.

See also *The Housing Discrimination Study: Synthesis*, by Margery A. Turner, Michael Fix, and Raymond Struyk, The Urban Institute, August 1991. Contact: The Urban Institute, P.O. Box 7273, Department C, Washington, DC 20044. Price: $9.00 prepaid.

SURVEY REPORT
Cameroon

Fertility has declined slightly in the Middle African country of Cameroon since 1978, according to a preliminary report from the nationally representative 1991 Demographic and Health Survey. The total fertility rate (TFR, or average lifetime births per woman) was 5.9 children, showing a downward trend from the TFR of 6.4 in 1978. The lowest TFR (4.5 births) was observed in the cities of Malabo and Yaounde; the highest (6.4 births) in rural areas.

More than seven in ten women said they knew of at least one method of family planning. Among modern methods, female sterilization is the most widely known (53 percent), followed by the pill (49 percent) and the condom (44 percent). Among traditional methods, periodic abstinence is the best known (45 percent). Only one woman in two claimed to know a source for modern methods, however, and only 4 percent were currently using one. About three-fourths of husbands had heard of at least one contraceptive method, and about half (48 percent) have ever used a contraceptive method. Twenty percent reported they currently use a method.

Almost three-fourths (73 percent) of women in union declared they would like to have another child, 12 percent wanted no more, and 5 percent were undecided.

The great majority (70 percent) of children born in the last five years had mothers who had a prenatal consultation with a health professional, although only 14 percent of these professionals were doctors. Infant mortality has declined substantially within the past 15 years, but still remains relatively high at about 66 infant deaths per 1,000 live births.

—Sara Adkins-Blanch

The *Cameroon Demographic and Health Survey 1991, Preliminary Report*, was carried out by the Department of the Second Population Census of the Ministry of Plan and Development, with the technical assistance of IRD/MACRO International, Inc, Columbia, MD. It was released November 1991.

A.I.D. Rethinks Population Priorities

The U.S. Agency for International Development (A.I.D.) is currently exploring a new set of priorities for its population program. The proposed strategy would be designed to emphasize "demographically significant" countries—those with the largest populations and judged to have the greatest family planning needs. The priority countries (currently 17 in number) would include such giants as India, Indonesia, Brazil, Pakistan, Bangladesh, and Nigeria (see chart).

The agency generally spends substantially less per capita in large countries than in small ones. The strategic concentration of resources is needed, the plan's advocates say.

"A.I.D. has been an important player in international population assistance for the past 26 years," said a recent agency report. "Over that period, interest in, and demand for, family planning have grown tremendously. A.I.D.'s financial and staff resources have not grown commensurately, resulting in the need for a new, more rational resource allocation strategy."

A hoped-for increase in population funding of $50 million in FY1992 was to launch new initiatives for priority countries, along with bridge funding for existing programs in smaller countries. The agency also plans to continue bilateral population programs in about 26 nonpriority countries.

On Hold

Currently, however, implementation is on hold. Congress did not pass the anticipated foreign aid appropriations for FY1992, but only provided a continuing resolution, so that funding for the A.I.D. Office of Population remains at the FY1991 level of $208 million. Hope is dwindling that Congress will do more than pass another continuing resolution, also at FY1991 levels, during this session. In addition, A.I.D. has reportedly not yet reached agreement on all aspects of the plan.

"The strategy is still under discussion," said Bill Johnson, who, as head of the new Regional Coordination Division of A.I.D.'s Office of Population, would be responsible for the plan. "But ultimately some strategy which gives more emphasis to priority countries will probably emerge." In the meantime, some elements in line with the strategy, such as new programs in Uttar Pradesh, India, are proceeding.

Several other large countries would enter the high-priority list if they were to become eligible for A.I.D. assistance, including Myanmar, Vietnam, and Russia. Zaire is on the list, although no programs could be implemented until the current political crisis is resolved.

A.I.D.'s Proposed Priority Countries

	Population estimate mid-1992 (millions)	Family planning need measure*	TFR**	Percent of married women using contraception by method (any/modern)
Africa				
Ethiopia	54.3	3	7.5	4/3
Kenya	26.2	2	6.7	27/18
Nigeria	90.1	5	6.5	6/4
Tanzania	27.4	1	7.1	—
Zaire	37.9	2	6.1	—
Asia				
Bangladesh	111.4	6	4.9	31/24
India	882.6	30	3.9	49/43
Indonesia	184.5	5	3.0	50/47
Pakistan	121.7	7	6.1	12/9
Philippines	63.7	2	4.1	36/22
Near East				
Egypt	55.7	2	4.4	38/35
Morocco	26.2	1	4.2	36/29
Turkey	59.2	2	3.6	63/31
Latin America				
Brazil	150.8	3	3.1	66/57
Colombia	34.3	1	2.9	66/55
Mexico	87.7	3	3.8	53/45
Peru	22.5	1	4.0	46/23

* Percentage of aggregate family planning need among 95 countries (based on estimates of the number of women who want to space or stop having births, number of high-risk births, and number of high-parity births).

**Average number of children born to a woman during her lifetime.

Source: 1992 PRB World Population Data Sheet and A.I.D.

Making the List

Such a strategy "has a high probability of resulting in significant fertility decline," according to A.I.D.'s report.

A.I.D. planners first dubbed the approach the Bigger Impact Globally (or BIG) strategy. Because of the enormous size of the nations involved, it soon gained the nickname of the "BIG *country* strategy." However, a family planning need scale—based on the level of unmet need for family planning, the number of high-risk births, and the number of high-parity births (four children or more)—played a major role in determining priorities. Other countries may be added in the future. In over 50 countries, however, current arrangements for population assistance could be phased out. Some observers fear the new approach could jeapordize family planning progress in some small African countries with very high rates of population growth, where A.I.D. has been active in the past.

—Susan Kalish

For more information, see *An Analysis of A.I.D.'s Population Strategy for the 1990s*, by Duff G. Gillespie et al., Office of Population, U.S. Agency for International Development, working paper presented at the 1992 Annual Meeting of the Population Association of America.

DEMOGRAPHER'S PAGE

Teaching Demography: Strategies that Work with Students of All Ages

by Kimberly Crews

A 13-year-old boy stands at the front of the class, dipping blue-tinted water with a plastic measuring cup from a nearby bucket into a partially filled aquarium. A girl stands next to him, dipping water out of the aquarium with a one-third cup measure into the bucket labeled "the Great Beyond."

The aquarium—as all the class can see—is rather quickly filling up.

Pinned to the boy's t-shirt is a sign: "The Stork;" the girl's sign reads "The Grim Reaper." The teacher drives the lesson home to the attentive class: Just as the aquarium is filling up, so is world population growing—since the world birth rate (26 per 1,000) is about three times the death rate (9 per 1,000).

When are students old enough to learn about demography and population issues? High school? Middle school? Elementary? The population education program at the Population Reference Bureau has been working with elementary and secondary teachers for 20 years, developing learning materials on population and related issues. What we are finding is that the demographic perspective can be successfully introduced to middle-school students, or even younger children. The key is appropriate, well-designed lessons and materials that present the information concretely.

Elementary Students

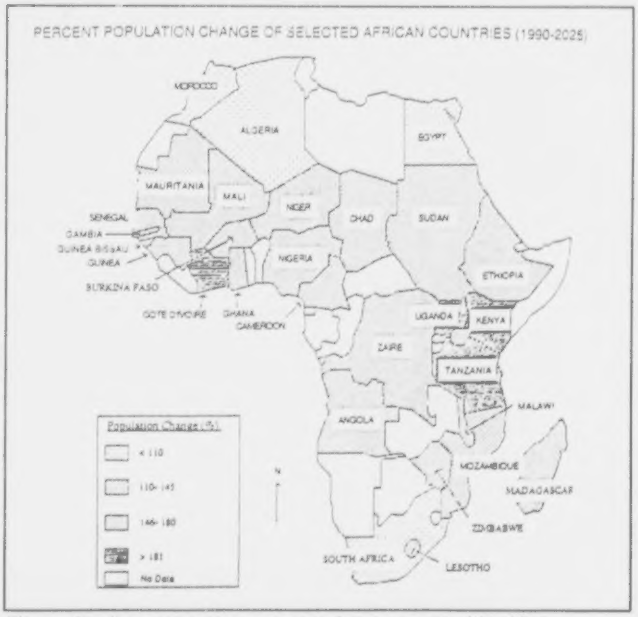
Students can begin to use demographic concepts to help make sense of the world while still in elementary school. Third or fourth graders are not too young to learn that countries and regions differ in terms of population size, distribution, and structure—or that such differences can be quantified. They can also begin to gain some sense of the nature of human population growth. Incorporating population studies into elementary curricula gives students information about world issues and new conceptual tools, while reinforcing skills they are already learning in core subjects.

In math classes in grades four to six, students learn to work with place values of millions and billions, practice estimation, become comfortable with reading and constructing graphs, learn to use percentages, and practice basic computation. In social studies, students learn world geography, examine human characteristics of places, draw and analyze maps and graphs, and examine environmental problems. These, as well as other skills developed in science and social studies, lend themselves to the study of world population.

One learning tool that elementary teachers find useful is *Connections II World Population Facts* (see Take a Number, page 10), which is part of the PRB elementary teaching kit. Designed for elementary level students, this fact sheet is a notebook-sized, simplified version of the foldout *PRB World Population Data Sheet*. (The *World Population Data Sheet* is a useful reference for older students, but is too complicated for most students in elementary grades.) *World Population Facts* lists only 20 countries and regions, simplifies the column headings, writes out all figures completely, and excludes any rates except percentages.

Elementary students can use this reference to compare the United States with other parts of the world, and to compare the sizes of the world, country, state, and local populations. Students practice place value by transferring information from the *World Population Facts* sheet to a worksheet. They practice reading and writing numbers in millions and billions, as well as become familiar with other demographic concepts. Data and concepts form a knowledge base on which to build a more thorough understanding of the world.

In another lesson, the class creates a statistical portrait of a child in a selected country. Students can work individually to develop a creative profile of an imaginary child in another country—a challenging writing exercise.



Example of a computer-generated map created by high school students.

Kimberly Crews is a Demogapher and Director of the Population Education Program at the Population Reference Bureau

Mark Affeldt

Students from Mark Affeldt's 4th grade class at Lodi Elementary School in Lodi, Wisconsin, create a human graph showing the whole history of population growth.

Population trends can also be taught through the use of maps and graphics. A dramatic way to show human population growth through time is by constructing a human graph (see photo). Each student represents 500 million people. The row of 10 students on the left represents population in the year 1992 (10 X 500 million = 5 billion); the student sitting down on the far right represents the population in the year 1 AD at 250 million. (Not shown in the picture is the shoe that represents the population of 4 million in 10,000 B.C.) The student at the head of each row holds up a sign giving the date and population size, with a symbol to represent the historical period.

The power of the population pyramid—to make readily apparent the overall age and sex distribution of an entire population—can be brought to life for elementary students by taking a census of their own families. (See Speaking Graphically, page 2.)

Secondary Students

Teens can work with fairly complex data, employ analytic techniques and advanced computation skills. They can conceptualize rates of birth, death, natural increase, and other demographic measures. World population can augment many subject areas—environmental science, biology, math, geography, history, global issues—and is particularly appropriate for team teaching.

Secondary students can use the PRB *World Population Data Sheet* to access summary demographic measures for 195 countries—but only with some preparation. Teachers need to take the time to guide students through the layout, column headings, and definitions of the variables, lest students otherwise feel overwhelmed by the quantity of data presented. One way to begin is to ask questions of the class and have them search for the answers with a partner. Once the students become comfortable with the process, they will begin looking up information on their own. Young people are usually intrigued by the variations in the data.

One rapport-building activity for this group is, "Connecting Population Clues," from the *CONNECTIONS* teaching kit for secondary students. This activity guides students to use the *World Population Data Sheet* to explore a country. It helps them understand the major demographic rates and variables, compare countries and regions, and consider the different environments in which people live.

Secondary students use the same data presentation tools—maps, graphs, speeches, prose—as those introduced in the elementary grades. However, teens can do much more in terms of application, analysis, and evaluation. Secondary students can gather and manipulate data, and present it in hand-drawn and computer-generated maps and graphs, and in oral and written reports.

Tenth grade students from Martha Sharma's class at the National Cathedral School in Washington, D.C. used MacAtlas software to prepare a choropleth map of Africa (pictured on facing page) highlighting an indicator chosen from the *World Environment Data Sheet*. They then analyzed the distribution of the indicator, compared it among six countries outside of Africa, and discussed the significance for Africa's future.

While middle and high school students can understand and construct regular population pyramids, the use of "modified" four-tier pyramids is a quick and easy way for each student in the class to draw and analyze the population structure of a different country. The pyramids can be constructed in a few minutes and intercountry comparisons can be made in one class period. Students can discuss the factors that determine the shape of a given pyramid, evaluate the implied prospects for future population growth, and identify clues as to the country's level of economic development.

College Students

Although population concepts can be introduced at the elementary and secondary level, most students in fact arrive at college with little or no background on these matters. Their first exposure is likely to be an introductory geography or sociology course. Many introductory geography instructors include the *PRB World Population Data Sheet* among their required course materials. Often, they do an introductory activity with the students and then encourage them to use it for reference.

Students might be asked to locate countries with the highest and lowest rates, or to rank the ten largest countries in order of current and projected popula-

Continued on next page

Demographer's Page

Continued from previous page

tion size. More thoughtful activities might ask students to analyze the projections, discuss data collection processes, or speculate about future population trends. Examples of such activities may be found in PRB's *World Population: Facts in Focus*, a workbook based on the data sheet.

The *World Population Data Sheet* can be used to encourage critical thinking about the terms "developed" and "developing." Says Vernon Domingo of Bridgewater State College, Massachusetts: "I divide the class up into four groups (Africa, Asia, Latin America, and Europe). They meet and have to select a country in their region which is most 'typical' (not too clearly defined). This results in lots of shifting of mental maps. Then they have to complete the worksheet for their country. Finally as a take-home activity, they have to study the data to explain which country is least 'typical.'"

Students of geography instructor Gail Hobbs at Pierce Junior College in California use the data sheet to complete two hand-drawn choropleth maps and a computer-generated map. While time consuming, these projects provide valuable experience in compiling data and interpreting data maps. It also aids students in reviewing (or learning) where countries are located.

Demography provides valuable conceptual tools that all students need to understand their world. Most students can benefit from its insights if the subject is presented at an appropriate level. The key is linking the powerful abstractions of demography with the richness of concrete reality. The younger the age group, the more the approach needs to be personalized and local.

Sources:

1. Geographic Education National Implementation Project, K-6 *Geography: Themes, Key Ideas, and Learning Opportunities* (Washington, DC: GENIP, 1987).
2. Population Reference Bureau, *Making Connections II: Linking Population and Environment* (Washington, DC: PRB, 1992) (elementary students).
3. Population Reference Bureau, *CONNECTIONS: Linking Population and the Environment* (Washington, DC: PRB, 1991) (secondary and college students).
4. Population Reference Bureau, *World Population: Facts in Focus* (Washington, DC: PRB, 1988) (secondary and college students).

Population and Environment Study Kits

Since 1972, PRB has been active in developing classroom materials and training teachers to increase the level and quality of instruction about world population particularly in the secondary classroom. In 1991, PRB published a secondary-level teaching kit, *CONNECTIONS: Linking Population and Environment.* Although developed for teachers in grades 7-12, the versatile materials have been used by instructors from kindergarten to college levels.

The *CONNECTIONS* project included teacher-training workshops, held from Alaska to Florida. In these one-half to two-day workshops, teachers learned the basics of population dynamics, analyzed the relationship between population and environment, examined global connections, participated in classroom activities, and took home a wealth of resource and classroom materials (see page 9 for upcoming workshops).

Teachers embraced the *CONNECTIONS* materials and requested additional materials for elementary teachers, workshops specifically geared to high school economics teachers, and dissemination to pre-service teachers. PRB responded by developing the two-year *CONNECTIONS II* project, which expands the scope of *CONNECTIONS.* The three new target groups are:

- Elementary teachers
- High school economics teachers
- Instructors of social studies methodology courses and pre-service teachers.

The materials on population and environment for elementary teachers will be ready for distribution in fall 1992. *Making CONNECTIONS II: Linking Population and the Environment* contains 26 lessons on world population growth, and population-environment interaction in Africa, Asia, and Latin America. The kit will contain a one-page, greatly simplified version of PRB's *World Population Data Sheet* (shown on page 10) and 8 1/2 x 11 inch color photos. Teaching kits will be distributed in future workshops or ordered from PRB.

With the World Bank, PRB will develop a workshop series on Global Resource Management and Sustainable Development for high school economics teachers. The first workshops will be held at national meetings in the fall of 1992 and in Maryland, Illinois, and Indiana in 1993. The series will be expanded in the fall of 1993 and in 1994. Workshop participants will receive an instructional unit on Global Resource Management and Sustainable Development, as well as resource materials from PRB and the World Bank.

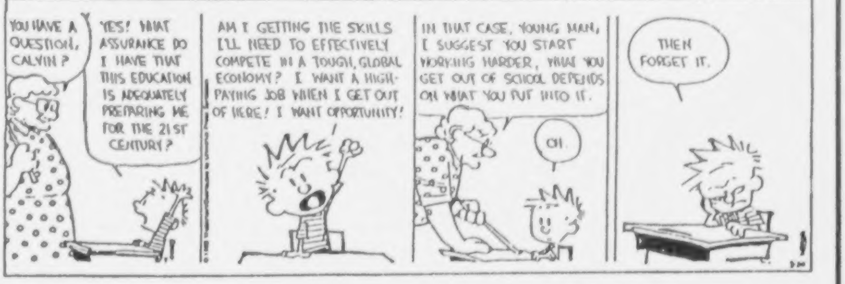
CONNECTIONS materials will be made available to pre-service teachers in at least five training workshops for instructors of teaching methods courses (and their students) between 1992 and 1994.

—Kimberly Crews

For more information about PRB's education program, upcoming workshops, or publications, please contact Kimberly Crews, Director, Population Education Program, at the Population Reference Bureau, 1875 Connecticut Avenue, N.W., Washington, DC 20009-5728, 202-483-1100.

ADDENDA

CALVIN AND HOBBES BILL WATTERSON


YOU HAVE A QUESTION, CALVIN?
YES! WHAT ASSURANCE DO I HAVE THAT THIS EDUCATION IS ADEQUATELY PREPARING ME FOR THE 21ST CENTURY?
AM I GETTING THE SKILLS I'LL NEED TO EFFECTIVELY COMPETE IN A TOUGH, GLOBAL ECONOMY? I WANT A HIGH-PAYING JOB WHEN I GET OUT OF HERE! I WANT OPPORTUNITY!
IN THAT CASE, YOUNG MAN, I SUGGEST YOU START WORKING HARDER. WHAT YOU GET OUT OF SCHOOL DEPENDS ON WHAT YOU PUT INTO IT.
OH.
THEN FORGET IT.

Calvin and Hobbes © 1992 Watterson, distributed by Universal Press Syndicate. Reprinted with permission. All rights reserved.

Upcoming Conferences

Teacher Training Workshops will be presented by PRB staff at the following conferences in the fall of 1992.

- The **National Council for Geographic Education** annual meeting, September 23-26 in Santo Domingo, Dominican Republic. This year's theme is "Exploration, Discovery and Impact." PRB will lead two workshops: "Resource Management and Sustainable Economic Development" for high school geography and economics instructors; and "Making Connections: Methods and Materials for Teaching About Population and the Environment" for elementary teachers.

  Contact: NCGE Central Office, 16A Leonard Hall, Indiana University of Pennsylvania, Indiana, PA 15705. Phone: (415) 357-6290.

- St. Petersburg, Florida will host the **Joint Council for Economic Education/NAEE** annual meeting, October 4-7. Come to the "Ideas and Innovation" session on Tuesday October 6. The session will provide participants an opportunity to learn about "Resource Management and Sustainable Economic Development" a joint project of PRB and The World Bank.

  Contact: Pamela Merritt, Joint Council on Economics Education, 432 Park Avenue South, New York, NY 10016. Phone (212) 685-5499 ext. 637.

- Fort Worth, Texas will be the meeting site of the **National Science Teachers Association's Southwestern Area Conference** as well as **Texas' 1992 Conference for the Advancement of Science Teaching**, October 15-17. PRB will lead a one-hour workshop, "Making Connections: Teaching About Population and Environment," on October 15 at 1:00 pm.

  Contact: NSTA 1992 Area Conventions, 1742 Connecticut Ave. NW, Washington, DC 20009-1171, Attn: T. Brent. Phone (202) 328-5800

- "Diversity: An Imperative for Survival" is the theme of the 1992 convention of the **National Association for Biology Teachers** to be held November 11-15 in Denver. PRB will lead a 75 minute workshop on Population and Environment.

  Contact: Wuanita Craven Ngo, Convention Coordinator, NABT, 11250 Roger Bacon Drive, #19, Reston, Virginia 22090. Phone (703) 471-1134.

- The **North American Social Studies Conference** will be held in Detroit, Michigan, November 20-23, 1992. The theme of the conference—the 72nd annual meeting of the National Council for the Social Studies—is "The Contemporary Relevance of 1492." PRB and the World Bank will present a session, "Resource Management and Sustainable Economic Development." PRB will also present a two-hour workshop, "Keeping Social Studies Fresh: Innovative Methods for Teaching Global Issues to Tomorrow's Instructors and Leaders."

  Contact: National Council for Social Studies, 3501 Newark Street, NW, Washington, D.C. 20016. Phone (202) 966-7840.

Contact Kimberly Crews at PRB for more information about PRB participation and opportunities to take part in CONNECTIONS training.

New Workbook: PRB's World Population Data Sheet

PRB's popular *World Population Data Sheet Workbook* is being updated and will include the 1992 World Population Data Sheet in 8 1/2 x 11 inch format. The workbook activities, tested by teachers, contain scanning, mapping, and data analysis exercises appropriate for use in middle school through college level courses. Detailed data for all the republics of the former Soviet Union will heighten student awareness of world geography. The new edition of this 20-page kit will be available in September 1992.

Price: $4.00 each (bulk copies of 2 or more, $3.00 each) plus a postage and handling fee of $1.00 or 4 percent of total order (whichever is greater). Orders less than $50.00 must be prepaid. Make checks payable to PRB. Order from: PRB Circulation Department, P.O. Box 96152, Washington, DC 20009-6152. For credit card orders, call 1-800-877-9881.

POPULATION UPDATE

Estimated United States Population:

As of April 1, 1992	254,710,000
As of April 1, 1991	251,992,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1086.

Estimated World Population:

As of August 1992	5,428,000,000
Annual growth	91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: January 1992

	12 Months ending with January					
	Number		Rate			
	1992	1991	1992	1991	1990	1989
Live births	4,121,000	4,174,000	16.2	16.6	16.3	15.9
Fertility rate	—	—	69.8	71.0	69.1	67.4
Deaths	2,178,000	2,147,000	8.6	8.5	8.7	8.8
Infant deaths	36,300	37,800	8.9	9.0	9.7	9.9
Natural increase	1,943,000	2,027,000	7.6	8.1	7.6	7.1
Marriages	2,354,000	2,446,000	9.3	9.7	9.7	9.7
Divorces	1,188,000	1,179,000	4.7	4.7	4.7	4.8

Note. Fertility rate is given per 1,000 women ages 15-44; infant deaths per 1,000 live births; other rates per 1,000 population.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 41, no. 1 (1992).

TAKE A NUMBER

CONNECTIONS II: WORLD POPULATION FACTS

	Past Population 1950	Current Population 1992	Future Population 2025 (projection)	No. of Children Per Family	Percent Urban[1]	No. of Children Out of 100 Born Who Die Before Age 5	Percent of Population Under Age 15	Percent of Population 65 and Older	Enough Food Daily?[2]	Wealth (per person in 1990)[3]
WORLD	**2,516,443,000**	**5,420,391,000**	**8,545,297,000**	**3**	**43**	**11**	**33**	**6**	**—**	**$ 3,790**
AFRICA	**221,984,000**	**654,218,000**	**1,539,583,000**	**6**	**30**	**15**	**45**	**3**	**—**	**630**
Egypt	20,330,000	55,680,000	103,115,000	4	45	11	41	4	Yes+	600
Kenya	6,265,000	26,164,000	62,275,000	7	22	9	49	2	No	370
Sahel Region	**16,502,000**	**44,028,000**	**109,957,000**	**7**	**25**	**—**	**46**	**3**	**—**	**375**
Burkina Faso	3,654,000	9,567,000	26,006,000	7	18	19	48	4	No	330
Mali	3,520,000	8,538,000	21,665,000	7	22	19	47	4	No	270
ASIA	**1,377,259,000**	**3,207,402,000**	**4,997,621,000**	**3**	**31**	**9**	**33**	**5**	**—**	**1,680**
Bangladesh	41,783,000	111,445,000	221,625,000	5	14	18	44	3	No	200
China	554,760,000	1,165,771,000	1,590,783,000	2	26	4	28	6	Yes	370
India	357,561,000	882,575,000	1,383,115,000	4	26	13	36	4	No	350
LATIN AMERICA	**165,880,000**	**452,784,000**	**728,769,000**	**3**	**70**	**8**	**36**	**5**	**—**	**2,170**
Brazil	53,444,000	150,794,000	237,172,000	3	74	9	35	5	Yes+	2,680
Mexico	28,012,000	87,715,000	143,287,000	4	71	6	38	4	Yes+	2,490
Peru	7,632,000	22,454,000	37,350,000	4	70	11	39	4	No	1,160
NORTH AMERICA	**166,075,000**	**283,046,000**	**362,647,000**	**2**	**75**	**<1**	**21**	**12**	**—**	**21,580**
United States	151,326,000	255,570,000	327,489,000	2	75	<1	22	13	Yes+	21,700
EUROPE*	**—**	**511,040,000**	**515,862,000**	**2**	**75**	**<1**	**20**	**14**	**—**	**12,990**
Germany	68,376,000	80,556,000	73,701,000	1	90	<1	16	15	Yes+	16,200
AUSTRALIA	**8,219,000**	**17,782,000**	**23,900,000**	**2**	**85**	**<1**	**22**	**11**	**Yes+**	**17,080**

* Includes newly independent Baltic states. — Data not available.

[1] **Percent Urban**= Percent of population living in areas called urban by that country.

[2] **Enough Food Daily**= Based on the per capita calorie supply. Yes means that most people get about the number of calories necessary to sustain a person at normal levels of activity and health. No means that most people do not get enough calories daily. Yes+ means that they get more than enough.

[3] **Wealth**= The gross national product (GNP) per capita for 1990.

Source: Population Reference Bureau, Inc.

RESOURCES

For this special issue of Population Today, *Kimberly Crews, director of PRB's Population Education Program, has compiled this listing of books and video tapes for teaching demography and population issues.*

Texts

Our Endangered Planet: Population Growth, by Suzanne Winckler and Mary M. Rodgers. Minneapolis: Lerner Publications Company, 1991. 64 pages. $15.95 hardbound. ISBN: 0-8225-2502-X.

Colorful photographs fill the pages of this balanced, well-conceived text on population growth written for upper-elementary to middle school students. Topics covered include the history of population growth, the mathematics of natural increase, the impact of human activities on the environment, endangered species, and family planning strategies. Special features engage the attention of the young reader: 1) Case studies feature children in Brazil, China, India, Hungary, and the United States; 2) "What if?" examples ask children to imagine themselves in a situation; and 3) A list of actions that children can carry out to conserve the earth's resources and provide a sense of involvement. Text includes a list of population organizations, glossary, and index.

Population: Too Many People?, by David E. Newton. Hillside, New Jersey: Enslow Publishers, 1992. 128 pages. $18.95 hardbound. ISBN 0-89490-295-4

This text from the *Issues in Focus* series, designed for young people ages 12 and up, challenges young people to do some critical thinking about the concept of "overpopulation." Basic background includes: an outline of historical population growth; an update of current World and United States trends; an entertaining introduction to the demographic equation; and an overview of the demographic transition. Fuel for debate follows in chapters featuring "pessimistic" and "optimistic" viewpoints. Malthusian and Neo-Malthusian theories featuring Hardin, Malthus, Ehrlich, and Boulding are followed by the anti-Malthusian viewpoints of Simon and Wattenberg. This book allows students to examine the complex nature of population growth and its implications without giving them the answers.

The Peopling of Planet Earth: Human Population Growth Through the Ages, by Roy A. Gallant. New York, NY: Macmillan Publishing Company, 1990. 163 pages. $15.95 hardbound. ISBN 0-02-735772-4.

This book examines the history of population growth since the emergence of humans. The author shows the relationships of geologic and technological changes to human migration and distribution patterns as he guides the reader through Africa, Asia, Oceania, Europe, and the Americas. The text covers supernatural and scientific accounts of human origins, population dynamics, environmental concerns, resource use, and the quality of life. Includes glossary, bibliography, and many maps.

Audiovisual Programs

A Popular Little Planet, by 3·2·1 Contact, 1992. Shown on PBS as a **3·2·1 Contact Extra**. 27 minutes, elementary to middle school. $26.84 (includes postage). Call 1-800-321-7511.

This engaging, informative production introduces population and environmental issues. It helps students understand millions, billions, and exponential growth with examples using manipulatives such as pennies and ping pong balls. The program also explores the relationship between population growth and environmental problems.

Note: Teachers may videotape 3·2·1 Contact programs as they are aired for in-school classroom use, as long as the tapes are erased within three years. Check your local PBS listings for exact broadcast times.

World Population, by Zero Population Growth, 1990. ZPG, 1400 16th Street, N.W., Suite 320, Washington, D.C. 20036. (202) 332-2200. Six minutes, elementary to adult audiences, $32.95 (includes postage).

This revised version of a 1972 classic film presents the best-ever graphic simulation of human population growth. In this video, dots are placed on a world map to represent millions of people added to the population from A.D. 1 to the present and projected to 2050. Historic references have been added to this edition to place population changes in context.

Population and People of Faith: It's About Time, by Institute for Development Training, 1991. P.O. Box 2522, Chapel Hill, NC 27515-2522. 27 minutes, teenagers-adults. $29.95 (includes shipping). Call (919) 967-0563.

Designed for church or religious school presentations, *Population and People of Faith* challenges viewers to work through their churches to address global population issues. The visually appealing video provides background information on population growth and its relationship to the world's social, economic, and environmental problems, focusing on the role and status of women in this equation. It highlights programs that increase women's access to health care, family planning, education, and employment. A bronze medal winner for 1991 from the International Film and TV Festival of New York, it presents a multi-cultural spectrum of population experts, ecologists, and church leaders.

SPOTLIGHT

Nigeria

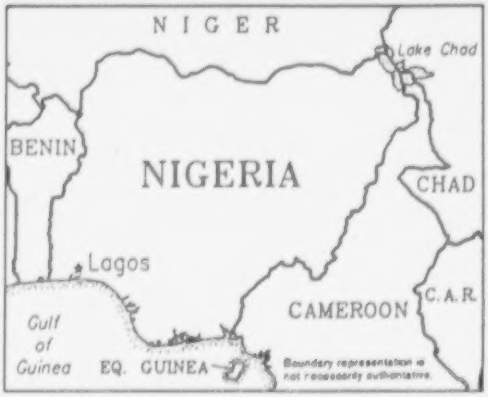
Population (1992 est.): 90.1 million
Total area: 356,670 sq. miles
Population density: 253 per sq. mi.
Births per 1,000 pop.: 46
Deaths per 1,000 pop.: 16
Rate of natural increase: 3.0 percent
Infant mortality rate: 114 infant deaths per1,000 live births
Life expectancy: 48 male; 49 female
Capital: Abuja (administrative)
Lagos (financial)

by Alex de Sherbinin

Located on the Gulf of Guinea—the cleft in Africa where the Niger River empties into the Atlantic—Nigeria's historically high population densities fostered numerous pre-colonial kingdoms. The highest concentrations of population are in the intensively cultivated southern rainforests and around the Niger River delta.

Over half of Nigeria's labor force is in the agricultural sector. From colonial times to the 1960s, the country's export economy was based on commercial crops. Now the economic mainstay is oil, which accounts for 97 percent of export earnings, or approximately $13 billion per year.

When oil prices rose from $2 to $34 per barrel during the 1970s, Nigeria experienced an unprecedented economic boom. When oil prices fell in the mid-1980s, the country found itself saddled with a crippling external debt—$35 billion in 1991,the highest in sub-Saharan Africa. Today, Nigeria is experiencing another type of boom, this one related to the highly profitable international narcotics trade.



Most of the country's industry is located in Lagos, a bustling and chaotic city of 5 million people. In an effort to escape the crime and congestion of Lagos, government offices are being relocated to the new capital of Abuja in the geographical center of Nigeria.

Seldom has a census attracted as much attention as did Nigeria's 1991 census, which came in 30 million lower than official estimates (see *PT*, June 1992). Factors that entered into the inflated estimates include uncertainties surrounding birth and death rates from the 1960s through the 1980s and the lack of reliable censuses. Nevertheless, the results are causing some officials to call for the diversion of resources from population programs to other "more pressing" socioeconomic problems—this despite a rapid population growth rate of 3 percent.

The government's 1986 population policy established an ambitious target of four births per woman by the year 2000, about two births less than Nigeria's current TFR (total fertility rate, or average lifetime births per woman) of 6.5. However, when asked how many children they considered ideal, 61 percent of all women said that family size was "up to God." The average for those who provided a number was 5.8. The use of modern contraceptives remains extremely low at 3.5 percent of married women, although from 1981 to 1990 knowledge of modern contraceptives among married women went from 22 to 44 percent.

Ethnic tensions continue, though not on the same scale as the bloody successionist war of the area called "Biafra" in the late 1960s, which claimed one-half million to 2 million lives. In January of this year, 2,000 people died in land conflicts in northeastern Nigeria, and ethnic and religious clashes were reported in the northern state of Kaduna this May. The 1991 census scrupulously avoided collecting politically sensitive statistics on religion and ethnicity.

Long-awaited presidential elections are scheduled for the fall of 1992, which could end almost a decade of military rule. However, any transition is likely to be difficult.

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POPULATION TODA

News, the numbers, and analysis

American Families: Greater Diversity, but Slower Change Ahead

By SUSAN KALISH

The past few decades have brought tremendous change in American family life. In comparison with the "Leave It to Beaver" image of the 1950s—when young women married on average at age 20, divorce was relatively rare, most fathers were the sole breadwinners of the family, and most mothers were homemakers raising three children—there has been change indeed.

PATRICK HERBERT

Today the average age at first marriage for women is 24; 26 years for men. About half of marriages end in divorce, making stepfamilies commonplace. Mothers are averaging only two children, and the majority of women are employed, at least part-time. Births to unmarried women have increased fivefold in the past three decades.

These changes have come so quickly that it is sometimes difficult for individuals, social institutions, or the experts to keep up. The Census Bureau, for example, has difficulty measuring the new types of family patterns. Most large-scale, nationally representative surveys cannot readily tell us what proportion of husband-wife families are stepfamilies; how adopted or foster-care children are faring; distinguish roommates from couples who are living together as unmarried partners; or measure the extent of family support networks for elderly persons who live alone.

On an individual level, family life in recent years has been subject to what Alvin Toffler termed "Future Shock." Social changes are happening so quickly that many people who grew up in "traditional" families, and developed their personal expectations of how families function within the norms of that structure, now find themselves psychologically unprepared—or at least confused—as changing times rewrite their family job descriptions.

Judging by the demographics, however, we may all get a breather during the 1990s. The pace of change should slow down over the next decade

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Lack of Development Puts Its Stamp on HIV/AIDS
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Changing Family

Continued from page 1

as members of the trendsetting baby-boom generation—the major engine behind the social change that has affected people of all ages—settle down to raise their children.

In the new family dynamics, the roles of wives and mothers and husbands and fathers have changed. Women's options around career and family are much more diverse than 30 years ago. Breadwinning has increasingly become a shared responsibility in married-couple households. Today, only about 20 percent of married-couple families have a strictly breadwinner-homemaker division of labor, compared with nearly 70 percent in 1940 (see chart). Although in general husbands remain the dominant breadwinner, providing on average about two-thirds of family income, the earnings of women are an important contribution. The median annual income of married-couple families in which the wife worked was about $47,000 in 1990, compared with $30,000 where the wife did not work.

An increasing proportion of women have also found themselves functioning as sole parent, at least for a period of time. Nearly one in eight families was headed by a single parent in 1991. Women are five times more likely than men to be raising a family alone and African Americans are almost three times more likely than whites to be single parents.

Most arrive at single parenthood through divorce but, for a growing proportion, the path is unmarried childbearing. Changing family structure is considered a major contributor to the growing poverty of children. The median income of a female-headed family in 1990 was $17,000.

As women increasingly share the role of breadwinner for their families, what has happened to the unpaid work of keeping the home going? Demographers Frances Goldscheider and Linda Waite examined this question using data from the National Longitudinal Survey of Young Women and Mature Women. They found that husbands make significant contributions to household tasks and children do some work. However, women continue to carry the bulk of the responsibility. Mothers in two-parent families reported that their share of the laundry, shopping, and cooking was around 80 percent. Even women with full-time employment spend an additional 20 to 30 hours per week on housework.

Meanwhile, men have also encountered new expectations in their roles as husband and father. In addition to being a good provider, media images now project the ideal father to be sensitive, nurturing, and caring. Social scientists confirm that men have modestly increased the time they spend taking care of their children.

Along with this new ideal, however, a cultural anti-hero has arisen: the so-called "deadbeat dad." In the separations and divorces that are fairly frequent in the fluid family structure of today, children generally remain with their mother. Most often, the father separates from the family, and in time goes on to attach to another. What this means is that a new pattern of fatherhood is emerging: for men to support and play an active parenting role with the children of the woman who is their current partner. Children from a previous union are often left without their father's economic and emotional support. Over half (58 percent) of divorced, separated, or never-married mothers are awarded child support, but only half of these women receive full payment.

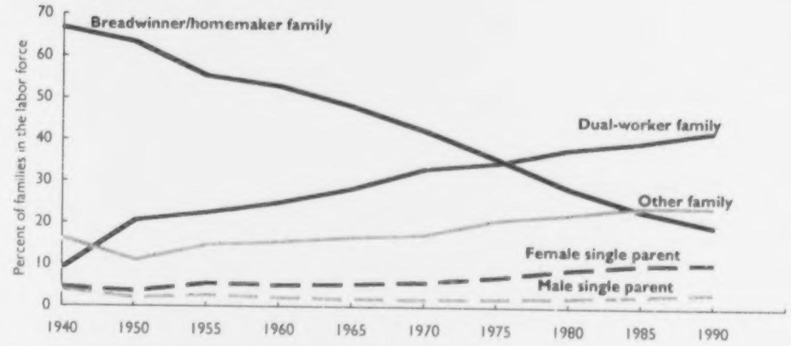
Family roles are particularly untested in the stepfamilies or blended families that have become more prevalent as a result of more widespread divorce and remarriage. Stepparents have a "limited license to parent" as demographer Andrew Cherlin writes. Typically, they must defer to the authority of the natural parent and become "skilled diplomats" and negotiators.

There are indications that future change will not continue at the same rapid pace witnessed over the past 20 or 30 years. Demographic factors in the 1990s suggest a slower pace of change in family patterns. The baby-boom generation, the largest generation in U.S. history, is in the prime ages for childbearing and childrearing. For the next ten years, there is likely to be little change in the overall share of families with children. But the composition of those families—whether single-parent, blended, multigenerational, or intact nuclear families—is likely to shift and change with time.

In the long run, two demographic trends will strongly influence the structure of family life. First, the aging of the population—that is, the continued growth in the size and share of the older population—will increase both the number of households without children and the number of persons who live alone. Second, the U.S. minority population is large and growing. Child poverty rates are two to three times higher for minority children than for non-Hispanic whites and this fact places a special spotlight on children in need.

As William Dunn of *American Demographics* magazine comments: "The family is battered but not defeated. The 1990s will be less disruptive to the family than were the 1970s or 1980s." ■

Families in the Labor Force: 1940-1990



Source: Hayghe, *Monthly Labor Review*, March 1990.

For more information on the prospects for the American family, see New Realities of the American Family, *by Dennis A. Ahlburg and Carol J. De Vita, Population Bulletin 47(2), 1992, Population Reference Bureau.*

Reforms Debated for 2000 Census

By MARK HUYLER

After some harsh reviews of the 1990 Census, the Census Bureau is searching hard for improved enumeration methods for the next census in the year 2000.

No less than 14 new designs are proposed, ranging from minor changes in format to radical alterations in the way demographic information is collected. In addition to studies within the bureau, outside committees mandated by both the Department of Commerce and Congress are evaluating the process.

In July 1992, Barbara Bryant, director of the Census Bureau, testified before the House Subcommittee on Census and Population on the results of recent tests conducted to see how different changes in format might improve the rates at which households filled out and mailed back census forms. The mail-back response rate was a disappointing 74 percent in 1990.

Of particular concern was the question of whether some format changes could improve mail-backs in low response areas. The results were encouraging, although none of the test formats eliminated the difference between high- and low-response areas. Options tested include:

- A graphic redesign of the 1990 Census questionnaire (to make it more "respondent friendly") improved response rates for the areas with low response. Design changes did not improve response rates overall, however.
- Asking for the Social Security numbers of household members lowered response rates overall as well as for areas with low response rates.
- Asking fewer questions improved overall response rates but not in areas with low response rates.
- A super-abbreviated format, asking only the names and dates of birth of household members did not improve response rates over a slightly longer version that had questions on race, sex, and Hispanic origin.
- One measure that improved response rates for all areas was sending out a follow-up replacement questionnaire if the first one was not returned to the Census Bureau.

Testing continues on additional options. The Census Bureau and the Task Force for Planning the Year 2000 Census and Census Related Activities for 2000-2009 (appointed by the Department of Commerce), will narrow the options to at most four formats by the fall of 1993. The bureau will test these formats and decide on a questionnaire design by the end of 1995.

Two National Academy of Science panels, authorized by the House of Representatives, have just begun an independent review of changes to the census. One committee will focus on census requirements; the other on census methods. These committees are charged with proposing changes for 2000 and beyond. With final reports expected in March 1994, it is unclear however, to what extent any of these recommendations could be implemented for the year 2000 Census.

Problems in 1990

Reforms are needed, critics say, because the 1990 Census cost more and was less accurate than the 1980 Census. The cost of the census increased 25 percent from approximately $20 per household in 1980 to $25 per household in 1990 (in constant 1990 dollars), according to a report by the U.S. General Accounting Office (GAO). The total bill for the entire census process is expected to come to $2.6 billion for 1990, a 65 percent increase over 1980.

The undercount was a contentious political issue in 1990, as it had been in 1980. Demographic analysis suggests that the 1990 Census had a 1.8 percent undercount compared to 1.2 percent in 1980. The total undercount was approximately 4.7 million people. What is more, GAO estimated a minimum of 14.1 million errors including missing and improperly counted persons.

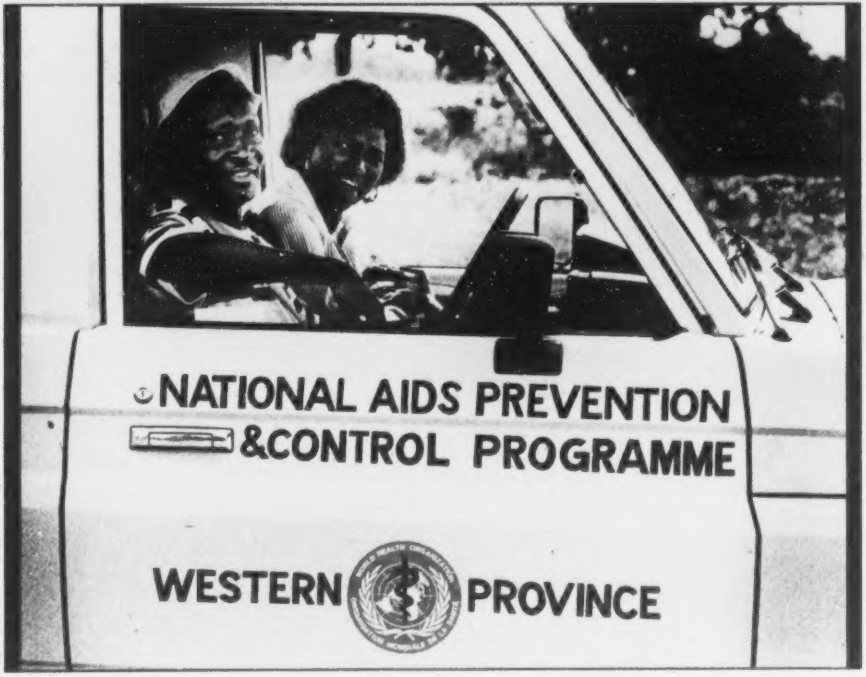
The uneven distribution of this undercount is a complicating factor. Undercount rates are typically higher in urban areas and areas of high black and Hispanic concentration, prompting demands by undercounted groups and some cities to have the census figures statistically adjusted (see June 1991 *Population Today*).

Possible Changes

At the urging of GAO, much of the Census 2000 research has focused on ways to increase the response rate of mailed census forms. Only about three-fourths of households filled out their census forms and mailed them back in 1990—a 9 percentage point drop from 1980. Although the Census Bureau sent out enumerators to collect the missing information, the data collected by enumeration was both less accurate and more expensive to collect.

Many reform proposals focus on improving the address list. A great deal of time and money was wasted in 1990 attempting to enumerate housing units that were not residential, were improperly addressed, or did not exist.

In addition, proposals are being aired to use administrative records to fill in missing information on household characteristics. The 1990 Census experimented in a limited way with this approach, for example, by using criminal justice records to get information on people just out of prison (parolees and probationers). Proposals for broad second-hand use of government data bases in future censuses, such as Social Security or IRS files however, raise serious privacy concerns. ■



RON GILING/PANOS PICTURES

Lack of Development Puts Its Stamp on HIV/AIDS

By ELISE STORCK *and* NICOLE BROWN

The human and economic costs associated with the human immunodeficiency virus (HIV) and AIDS have been particularly severe in the poor countries of the world. In the developing countries of Africa, Asia, and Latin America the HIV/AIDS pandemic takes a different course than in the more developed countries. The disease kills more people, more swiftly, and typically across a broader spectrum of society.

In developing countries, sexual transmission between men and women is much more common than through homosexual unions or from sharing needles in drug abuse. Fewer resources are available for prevention campaigns or to delay death from AIDS once infection has occurred.

It is widely recognized that HIV/AIDS affects the prospects for development by disproportionately striking down adults in their most productive years and absorbing scarce social and economic resources. It is less well recognized that the conditions of underdevelopment affect the course of the disease and its impacts on society.

Issues concerning the prevention and management of HIV/AIDS take on a different set of infrastructural, economic, social, and political constraints in a developing country. Assumptions held in more developed countries about health care resources and institutional capacities for dealing with the pandemic may not hold in the developing world. For example, in the African nation of Rwanda, the doctor-to-patient ratio is 1 to 34,000 compared with 1 to 507 in the United States. In Brazil, with over 40 percent of the reported AIDS cases in Latin America, AIDS service organizations work without telephones or other office equipment. In India, where 1 million people are believed to be infected with HIV, many poor men routinely sell their blood for income, yet blood banks do not always have the equipment to screen blood for HIV.

Even prevention strategies designed for developed country settings may not be appropriate in this setting. For example, it may not be possible to implement the routine use of condoms to prevent the spread of HIV/AIDS in a society in which childbearing is the dominant role for women. Coping with the HIV/AIDS epidemic worldwide requires an understanding of the reciprocal impacts between the disease and underdevelopment.

Over the last decade, the pandemic has spread quickly through the developing world. AIDS was first diagnosed in 1981. In July 1992, the World Health Organization (WHO) announced that over one-half million (501,272) AIDS cases had been reported in 168 countries. Taking into account underreporting and underdiagnosis, however, WHO estimates that some 2 million people (including one-half million children) have developed AIDS since the beginning of the pandemic. In addition to total current AIDS cases, WHO estimates that 10 to 12 million adults worldwide are now HIV-positive, three-fourths having been infected heterosexually. By the year 2000, 30 to 40 million adults and 10 million children will likely have HIV. More than 90 percent of these will be in developing countries.

HIV is an expensive disease. It puts a heavy burden on the health, communications, and social services infrastructure of developing countries. In Latin America and Asia, as well as in extremely poor areas such as sub-Saharan Africa, the cost of treating the disease may overwhelm institutional capacities and threaten the availability of care for other illnesses.

Yet, the direct costs of medical care for HIV/AIDS are only a fraction of the social costs associated with the pandemic. The disease crowds out other patients from over burdened health-care systems, necessitates carrying out national prevention education campaigns (in some cases in multiple languages), and creates extreme economic and psychological hardships in affected households.

At the same time that the HIV/AIDS pandemic has been on the rise, many governments are in the midst of a debt crisis and are implementing economic stabilization and structural adjustment policies. Cuts in social services have squeezed already scarce health resources. During the 1980s, health-care spending per capita dropped by more than half in the poorest 37 countries of Africa and Latin America. Scarcity of foreign exchange to pay for imports means that hospitals and clinics in debt-stricken countries often lack basic medicines to treat complications of AIDS (such as tuberculosis) and equipment to identify HIV-infected blood.

In many countries, government agencies implement HIV education and prevention campaigns. But in countries where there is distrust of the government, official HIV education campaigns are suspect and likely to be ineffectual. In South Africa, for example, where apartheid has politicized every aspect of social relations, many people in the townships are suspicious of government AIDS programs. This suspicion often translates into denial by many that they are at risk. Official programs promoting the use of condoms face accusations of having a hidden agenda: to limit the growth of the black population.

Seeking Work but Finding HIV

Throughout the developing world, and in Latin America and Africa in particular, the number of people living in absolute poverty increased during the 1980s. Low levels of education, crowded and unsanitary living conditions, limited access to health care, poor nutrition, and high rates of unemployment may all lead to behaviors that place people at risk. Rural poverty in the developing world increases migration to urban areas, which can put people at new risk for HIV. Some of the social and economic conditions associated with urban living encourage patterns of behavior that increase the risk of HIV infection. Men looking for work may be separated from their families for months at a time and while living in the city engage in behaviors—such as drug and alcohol abuse or visiting prostitutes—which increase the risk of HIV infection. When these economic migrants return to their villages, they put their partners and future children at risk as well.

Even where condoms are available, many women are unable to negotiate their use with their partner.

Many women also leave the support networks of extended family and village, and go to cities in search of work. Limited economic options are most acute for rural women, many of whom never had the chance to develop employment skills. In extreme poverty, many women may turn to prostitution to support themselves and their children. Even understanding the danger of becoming infected, women will consciously opt to put themselves at risk for the sake of immediate survival.

In Thailand, for example, where some 800,000 individuals work as prostitutes (compared to 700,000 teachers) female commercial sex workers are often teenagers from rural communities, helping to support their families. The Thai sex industry has flourished during the past three decades and is estimated to serve tens of thousands of Thai men and foreign tourists. Tourism, including sex tourism, is Thailand's biggest earner of foreign exchange, estimated in 1990 to account for 6 percent of GNP.

Cultural Blind Spots

In many traditional cultures, a woman's value is measured in terms of the children she bears. Childless women face stigma, desertion, or divorce. In this cultural context, the "safe sex" strategy (using condoms and non-penetrative sex to prevent HIV) becomes problematic.

"Safe sex" presupposes sex without conception. Women must balance the wish to protect themselves against HIV infection with the desire for children. Even where condoms are available, many women are unable to negotiate their use with their partner, increasing the risk of infection or abandonment.

Sexual mores and practices have a profound effect on the prospects for managing HIV. In societies where traditional values and taboos make it difficult to talk openly about sexuality, coping with an epidemic spread primarily through sexual transmission poses additional challenges.

Yet, some responses from developing countries have been particularly creative, ranging from the use of popular music for reaching people who cannot read, to the establishment of children's HIV education programs, to training commercial sex workers and hotel employees to promote the use of condoms. What is needed is a broader application of education strategies that are responsive to community needs while being sensitive to cultural values. ■

Elise Storck is the director of the Development Education Program and Nicole Brown is acting director, Caribbean/Central America Regional Program at the Panos Institute. An education module, HIV & Development, *is available from the Panos Institute, 1717 Massachusetts Avenue, N.W., Suite 301, Washington, DC 20036, 202-483-0044. Cost: $2.95 each plus $1.00 shipping.*

What the 1990 Census Tells Us About Segregation in 25 Large Metros

By William P. O'Hare *and* Margaret L. Usdansky

Almost a quarter century has passed since the Fair Housing Act made it "unlawful...to refuse to sell or rent...a dwelling to any person because of race, color, religion, or national origin." Nevertheless, *de facto* residential segregation persists in U.S. metropolitan areas.

How harmful is segregation? Some observers believe segregation perpetuates inferior neighborhood schools, isolation from jobs, or high crime rates. Others point to potential benefits to minorities living in concentrated neighborhoods, such as increased political power and maintaining ethnic identity and cultural tradition.

During the past three decades, numerous studies have explored the extent of residential segregation and how it may differ in character from place to place.[1] This article updates the extent of racial and ethnic segregation using 1990 Census data. It examines 25 of America's largest metropolitan areas in which minorities make up 10 percent or more of the population.

Primary metropolitan statistical areas (PMSAs) were used, rather than consolidated metropolitan statistical areas (CMSAs). The largest PMSA examined was the Los Angeles-Long Beach area, with 8.9 million people; the smallest were San Francisco and Denver, with 1.6 million each.

The metro areas analyzed here include not only the central cities, but also the suburbs where growing numbers of minorities reside. One recent analysis found that among blacks living in large metro areas (over 1 million population), 31 percent were living in the suburbs in 1990 compared to 25 percent in 1980.[2] Often these suburban areas adjoin central city black neighborhoods that have expanded over the city boundaries, but this is not always the case. Hispanic and Asian suburban populations increased similarly during the 1980s.

The measure of segregation used is the Index of Dissimilarity, which indicates how evenly (or unevenly) different groups are spread across census tracts.[3] While it is useful to examine additional measures of segregation to obtain a complete picture, there is usually a high degree of correspondence among the various measures. The table on the opposite page compares the distribution of three minority groups—blacks, Hispanics, and Asians—to the distribution of non-Hispanic whites. On a scale of 0 to 100, 0 represents no segregation (that is, minorities and non-Hispanic whites are evenly distributed across the metropolitan area); 100 represents total segregation (the two groups live in completely separate neighborhoods). The Index of Dissimilarity for each of the three minority groups was combined in a weighted average to create an overall segregation index for each metro area.

Segregation linked to racial composition

The overall segregation index ranged from 41 (Riverside-San Bernadino) to 83 (Detroit). The unweighted average across metro areas was 62.[4] But there were marked differences among the minority groups: 71 for blacks, 50 for Hispanics, and 42 for Asians (see table). These disparities are similar to those noted in 1980, indicating little change in segregation throughout the decade.[5]

In most metros, blacks are more highly segregated than either Asians or Hispanics. In every metro area except Anaheim-Santa Ana, the segregation index is higher for blacks than for Hispanics or Asians. In Anaheim-Santa Ana, Hispanics (index=54) were more segregated than blacks (index=44).

The percentage of blacks in the metro population is linked to its overall segregation index. Thus metro areas where blacks make up a large share of the minority population, such as Detroit, St. Louis, Cleveland, and Chicago, tend to have higher overall segregation indices. Asians tend to be less segregated than Hispanics in most, but not all, metro areas.

There are striking regional differences in levels of segregation. The seven metros with the highest levels of segregation are all in the Midwest and Northeast. These are older industrial cities in the rustbelt that attracted many black migrants from the South to work in the heavy industries earlier in this century. The four metros in the Midwest (Detroit, Cleveland, St. Louis, and Chicago) had an average overall segregation index of 79 (see figure, note these are unweighted averages). The Northeastern metros (Newark, Philadelphia, New York, Boston, and Nasseau-Suffolk) had an average overall segregation index of 69, also relatively high.

The so-called "new minorities"—Hispanics and Asians—tend to comprise a larger proportion of the minority population in the growing sunbelt cities of the South and West. For example, Riverside-San Bernadino, where blacks make up only 7 percent of the minority population, has the lowest overall segregation index score (index=41). The average overall segregation index of metros in the South (Baltimore, Atlanta, Tampa-St. Petersburg, Clearwater, Houston, Dallas, Washington, D.C., and Miami-Hialeah) was 62. This score is somewhat less than in the Northeast or Midwest, but still higher than segregation levels in the West.

The nine metros with the lowest segregation scores are in the West: Los Angeles-Long Beach, San Francisco, Oakland, Denver, San Diego, Phoenix, Anaheim-Santa Ana, Seattle, and Riverside-San Bernadino. These metro areas tend to have large numbers of Hispanics and Asians with smaller populations of blacks. In addition, blacks are typically less segregated in large Western metros.

Social mechanisms of segregation

Metro areas with high levels of black residential segregation do not necessarily have high levels of Hispanic and Asian segregation. The correlation coefficient between the Index of Dissimilarity for blacks and that for Hispanics was .32, between blacks and Asians, .34—indicating only a weak statistical relationship between levels of segregation of different minorities in a given area.

These figures suggest that the social mechanisms and processes that result in segregated neighborhoods may

Continued on page 10

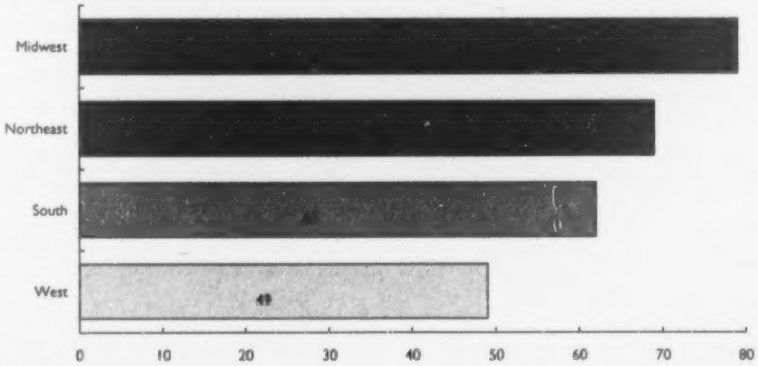
William P. O'Hare is director of the Population and Policy Research Program at the University of Louisville and Margaret L. Usdansky is a demographic reporter at USA Today. *The data presented here are from an analysis of 1990 Census data performed by Shawn McIntosh, special projects editor at* USA Today.

Metro Areas Ranked by Overall Segregation Levels, 1990

Metro area	1990 Population (in millions)	Overall segregation index	Index of Dissimilarity Black	Index of Dissimilarity Hispanic	Index of Dissimilarity Asian
1. Detroit, MI	4.4	83	89	42	48
2. Cleveland, OH	1.8	82	86	57	42
3. St. Louis, MO-IL	2.4	76	80	29	44
Chicago, IL	6.1	76	87	65	47
Newark, NJ	1.8	76	84	67	35
6. Philadelphia, PA-NJ	4.9	75	81	65	47
7. New York, NY	8.5	73	83	68	52
8. Baltimore, MD	2.4	71	75	35	42
9. Atlanta, GA	2.8	67	71	39	45
10. Boston, MA	2.9	62	72	59	46
Los Angeles-Long Beach, CA	8.9	62	74	63	48
12. Tampa-St. Petersburg-Clearwater, FL	2.1	61	74	47	39
13. Houston, TX	3.3	60	71	53	50
Nassau-Suffolk, NY	2.6	60	80	50	37
Dallas, TX	2.6	60	68	54	47
16. Washington, DC-MD-VA	3.9	59	67	43	35
17. Miami-Hialeah, FL	1.9	58	72	52	31
18. San Francisco, CA	1.6	54	66	51	51
19. Oakland, CA	2.1	51	66	48	34
Denver, CO	1.6	51	66	48	34
21. San Diego, CA	2.5	50	61	48	50
Phoenix, AZ	2.1	50	54	51	33
23. Anaheim-Santa Ana, CA	2.4	48	44	54	36
24. Seattle, WA	2.0	42	59	25	40
25. Riverside-San Bernadino, CA	2.5	41	49	39	38
Unweighted average	**3.2**	**62**	**71**	**50**	**42**
Highest metro score		83	89	68	52
Lowest metro score		41	44	25	31

Note: The overall segregation index is a weighted average of the Index of Dissimilarity of the three minority groups.
Source: *USA Today* analysis of data from the U.S. Bureau of the Census.

Average Segregation Levels by Region



Unweighted average Index of Dissimilarity for all metro areas in each region.
Source: Data from the U.S. Bureau of the Census.

NEWS CLIPS

32 million uninsured

Thirty-two million people—or about 13 percent of the population—lacked health care coverage in the last quarter of 1990, according to findings from *Health Insurance Coverage: 1987 to 1990.* Hispanics are the least likely to have insurance. Forty-six percent of Hispanics lacked health-care coverage for at least one month between 1987 and 1990, compared with 40 percent for blacks and 24 percent for whites.

Also at risk are young people: 50 percent of those ages 18 to 21 had no insurance for at least one month. Seventy-three percent of people ages 25 to 44 had continuous coverage, compared to 82 percent of 45- to 64-year-olds. People age 65 and over have universal coverage under Medicare. [U.S. Census Bureau, 25 June 1992]

German court delays abortion change

An injunction from the Federal Constitutional Court of Germany has delayed implementation of new, liberal abortion legislation enacted by German lawmakers on June 26. The new law legalized abortion within the first trimester of pregnancy, but requires counseling at least three days prior to an abortion. A full hearing to determine the law's legality is expected by the end of the year.

The issue of abortion has been divisive in Germany since reunification in October of 1990. Since then, the eastern and western regions of the country have been operating under different laws. In the West, abortion is legal only in dire medical, psychological, and social circumstances, as determined by a physician. West German women can be prosecuted for seeking abortions outside the country. The West German law is the most restrictive in Europe with the exception of Ireland's–although much leeway is allowed in a doctor's judgement. In the east, however, abortion is legal and free on demand. [*Los Angeles Times*, 26 June 1992 and *Washington Post*, 5 August 1992]

Roe v. Wade upheld, but...

The June 29 decision by the U.S. Supreme Court in *Casey v. Planned Parenthood* upheld by a narrow margin the 1973 *Roe v. Wade* decision, which guaranteed abortion as a constitutional right for all women in the United States. While upholding *Roe*, the 5-4 decision did not satisfy either anti-abortion or prochoice advocates. The High Court said that states may regulate abortion as long as "undue burden" is not placed on women seeking abortion, a standard that permits a range of interpretations by lower courts.

Provisions of the Pennsylvania law that were upheld as not being unduly burdensome include a 24-hour waiting period and parental consent for minors. States may also legislate abortion providers to give women information on alternatives to abortion. The spousal notification provision of the Pennsylvania law was struck down under the undue burden standard.

Not unexpectedly, abortion has become an issue in the fall election campaigns. Actions by Congress and the President on the Freedom of Choice Act (H.R.25 and S.25) could sharpen the debate. Delayed in court actions is enforcement of the "gag rule"—the Department of Health and Human Services' new regulation forbidding non-physicians in family planning clinics that accept Title X federal funding from discussing abortion with patients.

The presidential election will influence the future course of this issue, since the next president will probably have to take action on prochoice legislation and nominate a successor to 83-year-old Supreme Court Justice Blackmun, a strong supporter of *Roe v. Wade.* [*Washington Memo*, The Alan Guttmacher Institute, July 1992]

UNCED dramatizes new women's issues

A strong critique of efforts to reduce fertility in developing countries took some population advocates by surprise at United Nation's Earth Summit in Rio de Janeiro in June. It is important to understand the basis of this critique, says activist Karen Rindge of the National Wildlife Federation.

"Speeches made at the Planeta Fema—the associated women's conference—spoke harshly about the 'population control' movement and insisted on a new direction for addressing population, "one which does not focus on demographics, per se, as a problem." This new critique has three major concerns:

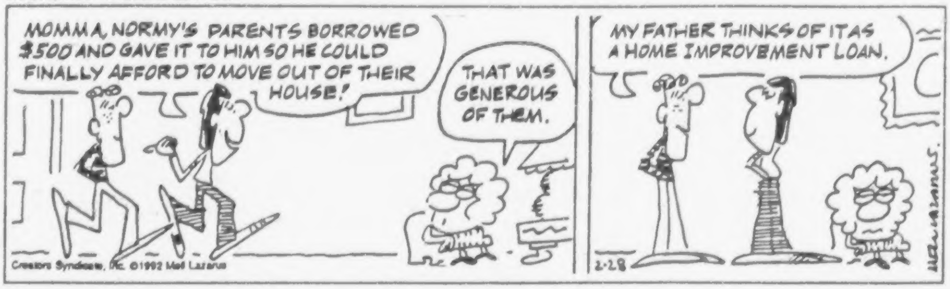
- Women fear that "too much emphasis on reaching demographic targets has led to coercion and forced sterilization of women" and could continue to do so.
- Women in developing countries "have sometimes been subjected to testing and use of unsafe contraceptives by corporations, international institutions, and governments."
- "It is feared that environmentalists do not care about women, seeing them only as breeders—that they only pay lip service to such terms as 'raising women's status.'"

Rindge said: "By the time we finished negotiating, it was clear there was a lot of common ground, but we need to keep listening and approach the issue in a more comprehensive way." [Congressional briefing by Karen Rindge, Population Program Coordinator, National Wildlife Federation, June 24, 1992]

Tulsa: typical?

Tulsa, Oklahoma, is the most demographically representative U.S. city, according to a study conducted by *American Demographics* and Donnelley

MOMMA MELL LAZARUS



MOMMA, NORMY'S PARENTS BORROWED $500 AND GAVE IT TO HIM SO HE COULD FINALLY AFFORD TO MOVE OUT OF THEIR HOUSE!
THAT WAS GENEROUS OF THEM.
MY FATHER THINKS OF IT AS A HOME IMPROVEMENT LOAN.
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2-28
MELL LAZARUS

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Marketing Services, based on 1990 Census data. Its representativeness could make it a favorite spot for the testing of consumer products. Tulsa's ethnic make-up, median home value, and age distribution mirror that of the country as a whole. Tulsa's population of 367,000 is 79 percent white and 14 percent black, compared to the U.S. totals of 80 and 12 percent respectively.

Other cities that ranked as promising testing sites include: Charleston, W. Va.; Midland, Tex.; and Springfield, Ill. The study breaks the stereotype of traditional test cities such as Peoria, Ill., Fort Wayne, Ind., and Green Bay, Wisc. [*New York Times*, 1 June 1992]

Incredible shrinking household stops

The average U.S. household stopped shrinking last year, reversing a 140-year trend. The average number of people that comprise a household in the United States—2.63 people—remained the same in 1991 as in 1990, and nearly the same as 1989, according to a Census Bureau report.

Unemployment due to recessionary conditions could account for some of this trend, by discouraging the formation of independent households. Lack of resources can force individuals, single parents, and even married couples to double up with relatives. Also, many baby boomers are now having their children, which increases household size.

Other reported trends, however, would tend to decrease household size: fewer children, on average, per household; a smaller number of households with any children; and a greater number of single-parent households. [U.S. Bureau of the Census, *Current Population Reports* – Series P-20, no. 458, February 1992] ■

POPULATION UPDATE

Estimated United States Population:

As of May 1, 1992 254,935,000
As of May 1, 1991 252,205,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports* P-25, no. 1088.

Estimated World Population:

As of September 1992 5,435,000,000
Annual growth 91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*

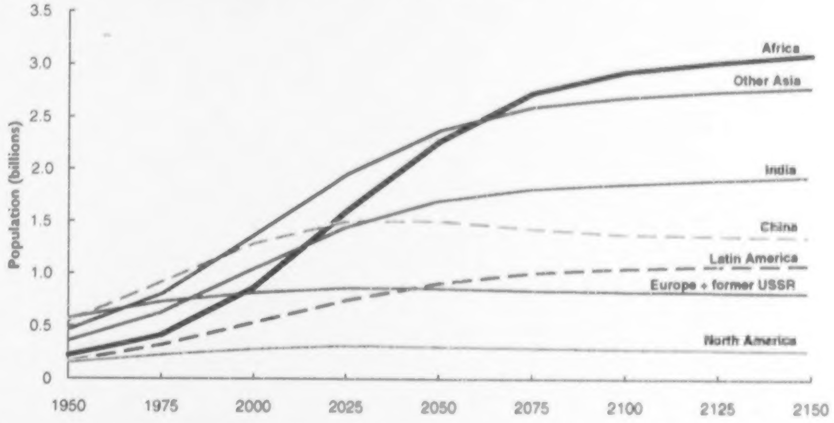
Latest Provisional Statistics for the U.S.: February 1992

	12 months ending with February				
	Number		Rate		
	1992	1991	1992	1991	1990
Live births	4,113,000	4,170,000	16.2	16.6	16.3
Fertility rate	—	—	69.7	70.9	69.4
Deaths	2,183,000	2,143,000	8.6	8.5	8.7
Infant deaths	36,200	37,800	8.8	9.0	9.7
Natural increase	1,930,000	2,027,000	7.6	8.1	7.6
Marriages	2,375,000	2,453,000	9.3	9.8	9.7
Divorces	1,190,000	1,182,000	4.7	4.7	4.7

Note: Fertility rate is given per 1,000 women ages 15-44; infant deaths per 1,000 live births; other rates per 1,000 population.
Source: National Center for Health Statistics, *Monthly Vital Statistics Report* vol. 41, no. 2 (1992).

SPEAKING GRAPHICALLY

Regional Population Growth into the 22nd Century



Source: United Nations, *Long-Range World Population Projections: Two Centuries of Population Growth, 1950-2150* (New York: UN, 1991).

In the 200 years between 1950 and the year 2150, world population is projected to increase from 2.5 billion to 11.5 billion. This graph shows the course of population growth in different regions of the world and how each will contribute to the accumulating total.

TAKE A NUMBER

World Population Clock, 1992

	World	MDCs	LDCs	LDCs-China
Mid-1992 population	**5,420,391,000**	**1,223,967,000**	**4,196,424,000**	**3,030,653,000**
Births per:				
Year	141,242,000	17,240,000	124,002,000	101,060,000
Month	11,770,167	1,436,668	10,333,502	8,421,637
Week	2,708,743	330,630	2,378,114	1,938,125
Day	386,964	47,233	339,732	276,876
Hour	16,124	1,968	14,155	11,536
Minute	269	33	236	192
Second	4.5	0.5	3.9	3.2
Deaths per:				
Year	50,202,000	11,512,000	38,690,000	30,879,000
Month	4,183,500	959,346	3,224,161	2,573,272
Week	962,775	220,780	741,997	592,203
Day	137,540	31,540	106,000	84,601
Hour	5,731	1,314	4,417	3,525
Minute	96	22	74	59
Second	1.6	0.4	1.2	1.0
Natural increase per:				
Year	91,040,000	5,728,000	85,312,000	70,180,000
Month	7,586,667	477,333	7,109,333	5,848,333
Week	1,745,968	109,852	1,636,116	1,345,914
Day	249,425	15,693	233,732	192,274
Hour	10,393	654	9,739	8,011
Minute	173	11	162	134
Second	2.9	0.2	2.7	2.2
Infant deaths per:				
Year	9,554,000	305,000	9,249,000	8,469,000
Month	796,167	25,439	770,731	705,728
Week	183,227	5,855	177,373	162,414
Day	26,175	836	25,339	23,202
Hour	1,091	35	1,056	967
Minute	18	1	18	16
Second	0.3	0.01	.29	.27

Source: PRB's 1992 World Population Data Sheet

Segregation

Continued from page 7

affect blacks, Hispanics, and Asians differently. The lack of connection between levels of segregation among blacks, Hispanics, and Asians may also be related to kinds of metro areas where they are concentrated. Blacks tend to be concentrated in large industrial areas of the North, while Hispanics and Asians are more concentrated in metro areas of the West. The intergroup dynamics in these two types of areas may play a role in the levels of segregation among American minority groups. ■

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1. Karl E. Taeuber and Alma F. Taeuber, *Negroes in Cities: Residential Segregation and Neighborhood Change* (New York: Aldine, 1965).
2. William Frey, "Minority Suburbanization and Continued 'White Flight' in U.S. Metropolitan Areas: Assessing the Findings from the 1990 Census," Paper presented at the Population Association of American Annual Meeting, Denver, Colorado, May 1992.
3. Otis Dudley Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indices, *American Sociological Review* 20, (1955): 210-217.
4. This figure weights the minority groups within metros, but does not weight the index of Dissimilarity in each metro by the population size of the metro area. If figures were weighted by the population size of the metro, the average would be 64.
5. Nancy A. Denton and Douglas S. Massey, "Residential Segregation of Blacks, Hispanics, and Asians by Socioeconomic Status and Generation," *Social Science Quarterly* 69 (1988):797-817.

POPULATION TODAY

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Assistant Editor: Sharon Hershey
Demographic Editor: Carl Haub
Director of Publications: Carol J. De Vita
Art/Production Manager: Aichin L. Jones
Production Assistant: Jacqueline Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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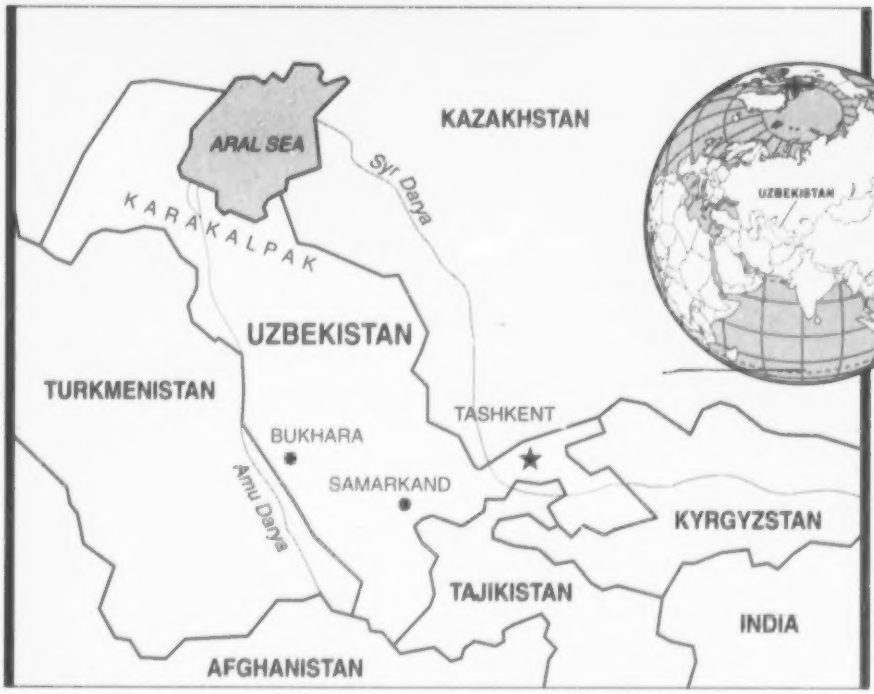
SPOTLIGHT

Uzbekistan



Population: 21.3 million
Land area: 172,700 square miles
Births: 34.6 per 1,000 population
Deaths: 6.2 per 1,000 population
Natural increase: 2.8% per year
Total fertility: 4.1 births per woman
Infant deaths: 64 per 1,000 live births
Life expectancy: 66(male)/72(female)
Capital city: Tashkent

By ELIZABETH LEE

Uzbekistan's population of 21.3 million, about the size of Taiwan's, makes it the third largest of the 15 former Soviet republics. Its population density is close to that of New Hampshire's in an area two-thirds the size of Texas. The population is 71 percent Uzbek, with minority populations of Russians, Tajiks, Kazakhs, Tartars and Karakalpaks. Since independence, there has been significant Islamic revivalism in this predominantly Sunni Muslim republic.

Uzbekistan declared sovereignty in June 1991, joined the Commonwealth of Independent States in December, and became a UN member this March. Uzbekistan's president is committed to reforming the country's relatively undeveloped economy. In 1989, 44 percent of the population earned less than 75 rubles, well below the poverty line for the former USSR.

The new nation, located in the heart of Central Asia between the region's two major rivers, is largely desert dotted with fertile oases. The country lies almost entirely in the internal drainage basin of the Aral Sea, the world's fourth largest lake. The economy is dominated by cotton, cultivated under intensive irrigation in this arid land that receives only about eight inches of rain a year. With 47 percent of its land planted to this crop, Uzbekistan is the world's third leading cotton producer. Natural gas production provides a secondary source of revenue. Cotton has been both a blessing and a curse. While a major employer (40 percent of the workforce), this thirsty crop has also led to severe environmental degradation and health problems.

Much of the water required for irrigation is siphoned from the Amu Darya and Syr Darya rivers that feed into the Aral Sea. Irrigation and river diversion schemes initiated in 1960 caused a 13-meter drop in the Aral's water level, reducing its area by 40 percent. In some areas the sea has receded more than 120 kilometers.

Shrinkage and increasing salinization have decimated the region's once-thriving fishing industry, killing off 20 of the 24 native commercial fish species.

Salt residues from the retreating waters and improper irrigation of crops are toxic to plants, eventually rendering the soil barren. Residues of salt, fertilizers, and pesticides are swept up in wind storms and deposited around the region, polluting the air, crop land, and drinking water. Health statistics of the region reflect these environmental hazards. Respiratory diseases were the third leading cause of death in 1988, just behind cardiovascular disease and cancer. Some 45 percent of citizens in the worst affected region, Karakalpak, which borders the Aral Sea, are reported to suffer respiratory complications.

Acute respiratory infections, perinatal conditions and diarrheal diseases are prime causes of infant death. In 1989, the infant mortality rate was estimated at 64 per 1,000 live births, far above Western Europe's average of 7. Karakalpak's rate is the highest in the nation.

The republic also records a high birth rate. Its total fertility rate (TFR, or average lifetime births per woman) in 1991 was 4.1, down from a rate of 5.9 in 1969-1970. Its growth rate of 2.8 percent per year is similar to Kenya's.

Uzbekistan does not have a national population policy but in 1990 began a mass campaign to promote contraception. The effort was initiated in urban areas, where about 40 percent of Uzbeks live. The number of women using contraceptives is reported to have increased from 4,000 in 1991 to 62,000 in 1992. IUDs are the most commonly used method, followed by oral contraceptives and condoms. Reliance on abortion is high: urban women appear to average five abortions in their lifetimes. ■

RESOURCES

Cannon fodder loses value?

In classic political thought, the bigger the population size —and thus the potential size of the army—the better. This young-men-as-cannon-fodder formulation no longer reflects conventional wisdom. Today, the ability of forces to defend a country is also a product of the qualities of the civilian population: the resources and technology at its disposal, and their unity of purpose. In this thoughtful study, military scholar Laurence Freedman and sociologist John Saunders rethink the relationship between population change and national security for Europe, especially in light of the end of the Cold War and the economic gap between the prosperous North and the developing countries of the South.

- *Population Change and European Security,* by Lawrence Freedman and John Saunders. London: Brassey's, 1991. 295 pages. $56.00 hardcover. ISBN 0-08-040349-2.

Growing up poor and urban

Millions of children are growing up in extreme poverty in urban areas around the world without basic necessities such as safe housing, proper nutrition, health care, or education.

Increased population growth and continued rapid urbanization will only make the problems more severe in the future. *Children of the Cities* examines themes of poverty, family, crime, homelessness, health, education, and work.

- *Children of the Cities,* by Jo Boyden, with Pat Holden. London and New Jersey: Zed Books, Ltd., 1991. 150 pages. $17.50 paperback. ISBN 0-86232-957-4.

Updated city and county data

The *1992 County and City Extra* is an updated version of the Census Bureau's venerable *County and City Data Book.* Formerly issued every five years, the new annual version is produced by two former Census Bureau employees, Courtenay Slater and George Hall, who now run their own company. It provides demographic indicators for states, counties, metro areas, and cities.

- *1992 County and City Extra: Annual Metro, City and County Data Book,* edited by Courtenay M. Slater and George E. Hall. Lanham, MD: Bernan Press, 1992. 1101 pages. $79.95 hardcover. ISBN 0-89059-004-4.

Health care demography

The authors of *The Demography of Health and Health Care* attempt to define the emerging field of health demography. They explore how population size, distribution, and composition affect the nature of health and illness in a society. The book gives an overview of the U.S. health care system, examines concepts and processes within the field, and discusses health care policy applications for the United States. The book is intended for use by academic audiences, applied demographers, and health care administrators.

- *The Demography of Health and Health Care,* by Louis G. Pol and Rochard K. Thomas. New York: Plenum Press, 1992. 381 pages. $45.00 hardcover. ISBN 0-306-43981-6.

Population and environment issues inseparable

Population control, reduced consumption, and technological advancement are the keys to sustainability, according to Paul Harrison in *The Third Revolution: Environment, Population, and a Sustainable World.* These three determinants, he writes, will decide how human society adapts to the environmental problems it has created, such as deforestation, land degradation, solid wastes, water pollution, and air pollution. Case studies explore how the three determinants act together in causing specific instances of environmental degradation.

Two major technological revolutions have occurred in response to a crisis of resources, writes Harrison: the agricultural revolution to food resources; and the industrial revolution to energy resources. The environmental revolution requires that we balance numbers, consumption, and technology with what the environment can support.

- *The Third Revolution: Environment, Population and a Sustainable World,* by Paul Harrison. London: I.B. Harris & Co., Ltd., 1992. 359 pages. $27.95 hardcover. ISBN 1-85043-501-4.

People and the planet

A new quarterly magazine, *People and the Planet,* explores the linkages between population and the environment. A successor to IPPF's *People* magazine, *People and the Planet* is produced jointly by IPPF (International Planned Parenthood Federation), UNFPA (United Nations Population Fund), and IUCN (World Conservation Union). The first issue focused on the Earth Summit in Rio. Upcoming topics will include: people and the forests, people and water, and people and energy.

- Contact John Rowley, IPPF, P.O. Box 759, Regents Park, London, NW1 4LQ, England.

Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728

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POPULATION TODAY

News, the numbers, and analysis

New UN Projections Include Local Effects of AIDS

By Susan Kalish

The world's population in mid-1992 reached 5.5 billion, according to recently released UN projections: *World Population Prospects: The 1992 Revision.* On the whole, the global population picture is pretty much on track with projections made at the start of the decade. But if the worldwide view from 1992 is similar to that of the 1990s, it is rather different for certain countries and regions. There are some surprises—particularly for some AIDS-stricken countries of Africa, as well as for Latin America, China, and India.

World Bank

Compared with 1990 estimates, several countries of Africa are growing more slowly than expected, largely because of the impact of AIDS. However, the UN's projected effects of the AIDS epidemic on population size are modest compared with some recent speculation that AIDS could halt population growth in Africa.

Latin America is also growing more slowly than expected, but for a very different reason: fertility is falling faster than anticipated. The demographic billionaire China is growing slightly more quickly than projected in 1990, while India, the world's next most populous country, is growing somewhat more slowly.

At a growth rate of 1.7 percent per year, 93 million people will be added to the world's total in 1992—750 million by the end of this decade. As the 20th century ends, UN demographers believe the world population will total 6.2 billion.

Currently, about 60 percent of the world's population live in only 10 countries (see figure, page 2). China and India alone make up 38 percent of the total. Another 14 percent are living in 12 countries with populations between 50 and 100 million people. *Continued on page 2*

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UN Surprises

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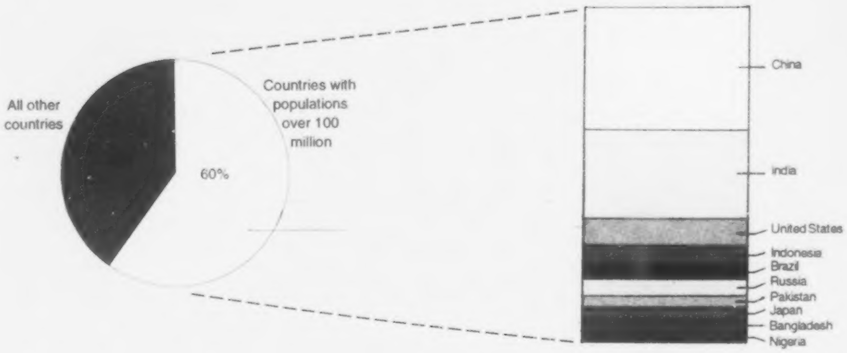
Share of World Population in 10 Biggest Countries



Source: United Nations Population Division

The population of the less developed regions of the world—including Africa, most of Asia, Oceania, and Latin America—is growing four times faster than in the more developed regions—such as Europe, North America, Australia, and republics of the former USSR. By the year 2025, world population may reach a whopping 8.5 billion, although by that time the growth rate would have slowed to 1.0 percent per year.

Still, this estimate of 8.5 billion in 2025 is 32 million smaller than was projected in the 1990 version. Surprisingly, developed countries added 49 million more people than previously projected, while developing countries added 81-million fewer.

AIDS cuts life expectancy

With the 1992 revisions, the UN Population Division has for the first time taken account of the potential demographic impact of the AIDS pandemic. Life expectancies have been adjusted downward in the 15 countries where AIDS has highest prevalence: Benin, Burundi, Burkina Faso, Central African Republic, Congo, Côte d'Ivoire, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, Zaire, Zambia, and Zimbabwe.

The new revisions for these countries change life expectancy (and thus population totals) *retroactively*, over the past 5 to 10 years. The Population Division modeled the AIDS epidemic as beginning in the late 1970s and early 1980s. Life expectancy for some countries decreases instead of increases in the 1980s and 1990s.

Earlier population assessments generally modeled life expectancy as steadily increasing over time as less developed countries improve their standards of living and health care. Even now, in four of the 15 countries, Kenya, Mozambique, Benin, and Burkina Faso, the effect of AIDS is to slow down gains in life expectancy.

- In countries where life expectancy drops, it does so in the early 1990s. It is forecast to renew its upward climb in the late 1990s or early 20th century.
- AIDS will reduce life expectancy between one and two years in the Central African Republic, Malawi, Rwanda, Zimbabwe, and the Congo. It will reduce life expectancy somewhat less in Côte D'Ivoire, Tanzania, Burundi, and Zaire.
- In Uganda and Zambia, life expectancy begins to fall earlier and drops dramatically: 6 years for Uganda and 8 years for Zambia. For both countries, the current life expectancy is 11 years lower than what was projected in 1990.

Over the next 25 years, population growth in these 15 countries could be 20 million less because of AIDS. Despite the substantial death toll, UN demographers project that population growth rates will remain strongly positive in the next few decades. The rapid pace of fertility will affect future population growth far more than mortality or any other demographic parameter.

Not a routine effort

The biennial effort of the UN Population Division to update world population statistics was far from a routine job this time around. Many geopolitical changes had to be accommodated. What was two Germanies in 1990 are now treated as one. Apparently, statistical tidying up after the dismantling of the Soviet Union—a massive endeavor—is still incomplete. The 1992 revisions now show population estimates and projections by sex and age for the Baltic Republics of Estonia, Latvia, and Lithuania. These three new countries are grouped within Northern Europe, upping the population by 8 million. The other 12 republics of the former USSR appear as an undifferentiated major region designated "USSR (former)."

The new revisions also take note of recent migration in Europe and the Middle East. The 1992 population of Iraq, for example, is down almost 5 percent from the level forecast in 1990, due to the Persian Gulf War.

The 1992 population of Latin America (Central plus South America) is one million smaller than forecast in 1990, mostly because family size is declining faster than anticipated. In South America, the total fertility rate (average lifetime births per woman) is 2.9 children, considerably lower than the 3.2 projected in the 1990 assessment. Also, censuses have come in lower than expected in Mexico, Brazil, and Colombia.

At 1.2 billion, China's 1992 population is about 15 million higher than anticipated in 1990. Despite a TFR that is currently around replacement level (2.2 lifetime births per woman) and expected to fall below replacement by the end of the decade, China's population is projected to reach 1.5 billion by 2025.

India's population is now estimated at 880 million, about 10 million lower than estimated in 1990. The reason seems to be that India's fertility is dropping faster than earlier anticipated. ■

Sahel Moves On Population Policies

In 1994, a major UN conference on Population and Development will meet in Cairo. What point of view, what sort of mood, will the less developed countries—where over nine-tenths of future population growth will occur—bring to the conference?

If the atmosphere of a population policy conference held in Dakar, Senegal, this July is any indication, the nine countries of the Sahel region could provide insight into the key issues and practical focus of the discussions. There is much movement afoot on population issues in the Sahel—a ferment that could be important both at the all-Africa preparatory conference coming up in December (also in Dakar) and the 1994 conference itself. The July conference was held under the auspices of CERPOD, the 14-year old Center for Applied Research on Population and Development located in Mali.

At the last UN conference on Population and Development, in 1984 in Mexico City, many less developed countries actively sought the help of wealthier countries to develop family planning programs. These bilateral efforts continue today, although after 1984 the United States withdrew assistance from UNFPA (the UN Population Fund) over the abortion issue. In preparatory meetings for UNCED (the UN Conference on Environment and Development held in Rio de Janeiro last June), however, some women's groups strongly criticized what they characterized as "the population control movement." Efforts to reduce population growth, they argued, focus on the wrong issues, paying insuffient attention to women's health and status.

Nothing like the contentious atmosphere of the UNCED "prepcoms" (preparatory meetings) or the Planeta Fema (the women's conference associated with UNCED), however, surfaced at the Sahel population discussion.

"There was a lot of solidarity," commented Alene Gelbard, director of International Programs at the Population Reference Bureau, who attended the July conference. "There was both a recognition of the challenge posed by rapid population growth in the context of their economic situations and a strong concern expressed to address the health and status of women and children."

The Sahel countries—which include Burkina Faso, Cape Verde, Chad, the Gambia, Guinea-Bissau, Mali, Mauritania, Niger, and Senegal—form one of the poorest and most rapidly growing regions on earth. The Sahara Desert crowds the region, which nonetheless is home to a population of 44 million. Life expectancy is only 49 years, and more than one out of every eight babies dies in infancy.

The Sahel faces strong population pressures: women average 6.5 births in their lifetimes and the contraceptive prevalence rate is no higher than 11 percent for any of the nine Sahelian countries. The natural rate of increase for the region is 3.1 percent per year. This means that, at current rates, the population would double in 23 years. The importance of these issues in the region was underscored by the attention the conference attracted from the media of the Sahelian countries.

Pronatalist heritage

The Sahel countries met together to discuss population and development issues almost four years ago. In Chad in January 1989 they formulated the N'Djamena Plan of Action on Population and Development in the Sahel.

Since 1989, the Sahel countries have been moving fast on these issues, according to Gelbard. "This is a region that has a strong pronatalist heritage, based in part on traditional values, but also as a legacy from French colonial powers. In 1920, for example, it was illegal under French law to advertise contraceptives," she said.

"It is dramatic that, in four years, four of the nine countries have adopted population policies, a fifth country plans to do so imminently, and policies or programs are in progress in each of the other countries. It really shows a new commitment to population issues and concerns." Senegal, Burkina Faso, Mali, and Niger had population policies as the conference opened, with the Gambia expected to adopt one this year.

Also striking to Gelbard was the more open discussion of family planning than was heard a few years ago. Another change was the presence of so many more women delegates than the earlier conference in Chad. Many of these women were in high-level technical positions, with responsibilities for implementing programs.

"On paper" versus in practice

Some delegates emphasized, however, that it is one thing to have a policy on population and development (or the equality of women) on paper and quite another to have it in practice.

One delegate referred to the following cautionary tale. When nearby Nigeria announced a population plan in 1988, it astonished the public with a recommendation for women to voluntarily limit births to four. Further, the four-child limit was mistakenly rumored to be an obligatory cutoff for births per woman, rather than a voluntary guideline. This caused concern among women's groups, who feared the measure might encourage men to take more than one wife to ensure many offspring, or enable Muslims (who allow polygamy) to increase faster than Christians.

The moral of this story was that technical people need to lay a groundwork for population policies with three key constituencies: policymakers, the press, and the general public.

Delegates stressed the need for specific actions to translate policy statements into practical results. ■

FAO/Iran Public Health Department

Children in Teheran face crowded schools and other facilities.

Slow Growth Efforts Renewed in Iran

By Akbar Aghajanian

In March, at the beginning of the new year by Iran's solar calendar, the Iranian government announced it would begin importing the contraceptive implant Norplant and would make it available along with other contraceptives at public clinics.

- Last year, the government announced that the fourth child of a family would not be eligible for food rationing or nutritional supplements and other public child benefits.
- In 1991, for the first time ever, the Minister of Health publicly encouraged male sterilization.
- Last fall, eager to get a reading on the current rate of population growth, Iran carried out a special census of the population five years in advance of the regular decennial census date of 1996.

These events testify to dramatic policy changes concerning population growth and family planning in this country of 60 million—the largest and one of the fastest-growing populations in the Middle East. Iran's pragmatic and proactive approach—evident since 1988—seems likely to accelerate a decline in fertility that began in the late 1960s, but stalled in the 1980s.

Few countries have a higher rate of population growth than Iran or have experienced more dramatic reversals in population policies over the past two decades. Iran promulgated its first population policy under the Shah in 1967. The Islamic Revolution occurred in 1979, and repudiated much of the earlier regime's ideas concerning women and childbearing. Iran fought a major war with Iraq from 1980 to 1988, and tended to view size and growth as an advantage in the war effort. After the war ended, however, the govenment of Iran began again to voice concerns over rapid population growth. The decennial censuses of Iran—which were carried out in 1956, 1966, 1976, and 1986—provide useful benchmarks of demographic change that accompanied these political shifts.

A modest fertility decline

Iran's first modern census in 1956 counted the population at 18.9 million. Over the next ten years, the population growth rate averaged 3 percent per year. In 1967, the Iranian government expressed official concern that the high growth rate was an impediment to development, and adopted its first population policy. The government instituted family planning programs that provided contraceptives and carried out communications efforts to promote their use. In a decade, the number of contraceptive users increased from about 10,000 in 1967 to more than 600,000—11 percent of women in the reproductive ages. The population policy was strengthened in 1970 and legislation passed in 1976 created a legal loophole for abortion. It approved any kind of operation for a woman, provided the consent of all persons involved was obtained. The government also took steps to open up educational and employment opportunities to women as indirect means of decreasing fertility.

While these policies were in effect, Iran's birth rate fell from 49 per 1,000 population in 1966 to almost 43 per 1,000 population in 1976. The most dramatic decline was in the urban areas, but fertility in rural areas also decreased. By 1976, the growth rate had slowed to 2.7 percent per year.

Later marriage and declining lifetime fertility caused the birth rate to decline. The average age for marriage for women increased from 18.4 years in 1966 to 19.7 years in 1976. During that time, the proportion of women ages 15 to 24 who had ever been married declined about 10 percent. But the most important factor was the decline in the total fertility rate (TFR, or average lifetime births per women) from 7.7 children to 6.3 children. Fertility declined most dramatically in urban areas, with the TFR plummeting from 7.4 to 4.4 children. In urban areas, women of all ages showed marked fertility decline (see figure).

Structural changes in the society and economy of Iran from the mid-1960s to the mid-1970s fostered lower levels of fertility. State investments fueled industrial development, and the share of manufacturing in the GNP rose modestly from about 11 percent to 17 percent. The number of hospital beds increased and literacy rates for men and women improved. These structural changes operated to increase the cost of raising children, to improve the status of women, and to lower fertility.

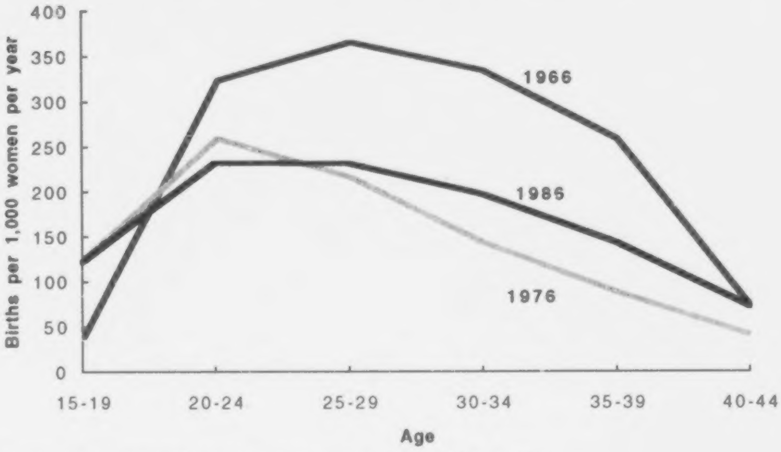
Slowdown

The establishment of the Islamic Republic in 1979 redefined the role of women in Iran within the context of the Islamic laws. Legal and social changes were introduced and enforced to reinstitute the traditional order, in which a women's first priorities were marriage, children, and home. Segregation of women was renewed in public places, universities, and work places. The majority of family planning services were cut.

During the war with Iraq, the government viewed large families as deepening the pool of future military manpower. The wartime rationing system for food, fuel, and other necessities, based on number of people in the family, provided an economic incentive to higher fertility. A government-funded institution, *Boniad Eve* (Marriage Foundation) was set up to provide furniture and other basic needs to couples who could not otherwise afford to set up a household.

Yet these changes had only slight effects on fertility. The rising average marriage age for women slowed to a standstill, remaining about the same as in 1976. The declining proportion of ever-married women in the 15 to 19 age group similarly slowed.

Age-Specific Fertility Rates for Urban Iran, 1966-1986



Source: Iran Statistical Center, Censuses of Iran, 1966, 1976, 1986

The TFR increased from 6.3 lifetime births per woman in 1976 to 7.0 in 1986, mostly because of increased childbearing by women over age 30. Nonetheless, fertility overall stayed well below 1966 levels for all age groups (see figure).

Between the 1976 and 1986 censuses, the population of Iran increased to 58.2 million (excluding the 1.8 million Afghan refugees in the 1986 count). The population growth rate averaged 3.4 percent per year, one of the highest in the world.

Renewed population concern

The decade of silence on population issues began to end in 1988, when Prime Minister Moosavi gave it new recognition on the governmental agenda. The Ministry of Planning called a national conference concerning population issues, which was well attended by government officials and members of the academic community. At least informally, the conference concluded that the high rate of population growth was a problem and would handicap postwar reconstruction efforts. In 1989, the Assembly of Representatives authorized the Ministry of Health to establish family planning programs and services.

Since then, the concern over population has deepened. The pill and the IUD are being imported and are available in public clinics. The number of family planning clinics and personnel have increased. The government uses radio and television to promote the goal of two- or three-child families.

A recent report by the director of the family planning program referred to the illiteracy of woman as the most important factor causing high fertility and rapid population growth. Other reports refer to rapid population growth in rural areas as the cause of migration to urban areas, city poverty, and deterioration of urban living conditions. Officials from President Rafsanjani to various members of government ministries have shown concern about population growth rates and support for population policy and fertility control. The Ministry of Health judges the program to have been effective during the past two years, crediting it with slowing the rate of population growth to 2.9 percent per year.

With all this activity, a major source of uncertainty remains: Will the status of Iranian women also change? Most experts believe that fertility reductions go hand in hand with changes in the social and economic conditions of women, goals which the Iranian government has not embraced. It is not clear what changes in traditional attitudes, if any, the future may bring. ■

Akbar Agajanian is Associate Professor of Sociology at Fayetteville State College in North Carolina

DEMOGRAPHIC PERSPECTIVE

U.S. Immigration and Ethnicity in the 21st Century

By Barry Edmonston *and* Jeffrey S. Passel

Over the past three decades, a massive shift has taken place in the countries of origin of U.S. immigrants. As a result, a predominantly European-origin society with a black minority is becoming much more heterogenous. The proportion of European origin is dropping, as sizable numbers of Asian and Hispanic immigrants arrive. Further, unlike earlier eras, the fertility of the resident population is quite low, below replacement level for the white population. Therefore, any racial or ethnic group without significant immigration will eventually experience declining numbers in the coming decades.

Over this century, immigration policy has been subject to sudden changes and reversals. This history of discontinuity makes long-term projections about immigration a hazardous business. Changes in policy and the presence of illegal entrants complicates measuring and projecting immigration flows. Acknowledging the risks, this article sketches the possible long-term impact of the immigration trends we observe today, if they were to continue for the next 50 years.

How many times removed?

This study uses a modified cohort-component approach for population projections by race/ethnicity and immigrant generation.[1] To do this, the base population, from the 1990 U.S. Census, was characterized in terms of age, sex, race, ethnicity, and immigrant generation, using four categories:

- The *foreign-born* (the first generation, all succeeding generations being considered native-born);
- The *second generation* (the sons and daughters of the foreign-born);
- The *third generation* (the grandchildren of the foreign born); and
- *All succeeding generations* (the fourth or succeeding generations).

Five mutually exclusive race/ethnic groups are used: European-origin (non-Hispanic white), black, Asian and Pacific Islanders, American Indian, and Hispanic.[2] In 1990, the population was 75 percent European origin, 12 percent black, 3 percent Asian, about 1 percent American Indian, and 9 percent Hispanic.

We assume that immigration will reach a level of about 1,125,000 each year, including 855,000 legal immigrants, 200,000 net undocumented immigrants, and a net gain of 70,000 from Puerto Rico and other sources. Taking emigration into account, the population projections assume a net immigration of about 900,000 in 1990 that levels off at 950,000 per year by 2005.

Asians and Hispanics to remain immigrant-centered

These projections suggest that the U.S. population will approach 350 million in the mid-2030s and reach 356 million in 2040 (see table). However, the rate of population growth will slacken, from about 1.1 percent a year during the 1990s to about 0.4 percent a year by 2040. Population momentum (fueled by a relatively high proportion of women in their reproductive years), as well as immigration, contribute to this moderate growth. Even with zero immigration and current low fertility levels, the U.S. population would continue to grow by about 30 million people over the next twenty years. Without any immigration, over the next 50 years, the United States would experience population decline.

Some broad patterns emerge. The Asian and Hispanic populations will remain predominantly immigrant-centered, with over half of their population groups consisting of immigrants plus their children. The black and European-origin populations will continue to be primarily fourth-and-greater generation.

If current immigration patterns continue, the country's racial and ethnic composition will be dramatically different by the year 2040.

European-origin. The European-origin population is projected to increase from 187 million to a peak of 211 million in 2030 and then gradually stabilize. Within the next 50 years, this group will become relatively less numerous and drop from 75 percent of the total population to less than 60 percent by 2040. The annual rate of growth of the European-origin population will dwindle from its current 0.6 percent per year to become a slight decline during the 2030s.

The generational distribution will also change. The proportion of second- and third-generation immigrants will decline and as the fourth-and-greater generations increase steadily, growing from 138 million in 1990 to 181 million in 2040. Thus the European-origin population will become more dominantly fourth-and-higher generation, increasing from 74 percent in 1990 to 86 percent in 2040.

Black population. Over the next five decades, the black population will increase substantially, from 30 million to 44 million. But the proportion black of the total population will remain stable, increasing from 12.1 percent in 1990 to 12.4 percent in 2040. The growth rate will drop from today's 1.3 percent per year to 0.4 percent in the 2030s.

The black population is now experiencing its first substantial immigration in the past two centuries, with about 120,000 people arriving from Africa and the Caribbean annually. However, unless current immigration patterns change markedly, the black population will continue to be predominantly of the fourth-and-greater generation, as are 92 percent of all blacks today.

Asian population. Asians are one of two groups likely to experience substantial growth during the next century—Hispanics are the other. The Asian population is projected to grow at rates exceeding 1 percent per year for the next 50 years. Asians could increase their proportion in the population from 3 percent in 1990 to 10 percent in 2040 or a fivefold increase in population from 7 million to 35 million.

Continued heavy immigration will maintain the rapid increase of the first-generation Asian population during the next several decades, growing from 4.8 million in 1990 to 17.1 million in 2040. The second generation will also increase substantially (from 1.6 million in 1990 to 12.7 million in 2040) as immigrants bear children in the United States. Under these assumptions, the proportion of first-plus-second-generation Asians, 88 percent of all Asians in 1990, would decline only slightly to 86 percent by 2040.

Hispanic population. Hispanics, assumed to have the largest share of immigration, partially because of their predominant share of illegal immigration, are projected to increase substantially over the next 50 years. The 22 million Hispanic population of 1990 will increase rapidly to pass the black population and become the nation's largest minority group by 2010. The Hispanic growth rate, at 3.0 percent per year in the 1990s, is projected to decline to just 1.4 percent per year by the year 2040. Our projections call for uninterrupted growth for five decades, at which time Hispanics will number 64 million and make up about one in five Americans—18 percent of the population.

U.S. Immigrant Heritage by Race/Ethnicity: 1990-2040

Race/Year	Total population (in millions)	Percent of the population that is— Foreign born	Second generation	Third generation	Succeeding generations
Total population					
1990	248.8	9	10	13	69
2040	355.5	14	13	8	65
European origin					
1990	187.1	3	8	15	74
2040	210.5	4	4	6	86
Black					
1990	30.0	5	2	1	92
2040	44.1	9	7	3	80
Asian					
1990	7.3	66	22	7	5
2040	34.5	49	37	11	3
Hispanic					
1990	22.4	41	27	14	18
2040	64.2	33	33	18	16

Notes: Columns and rows may not add to totals because of rounding. Total population includes American Indians (2.0 million in 1990 and 2.2 million in 2040); all are considered native born.
Source: *The Future Immigrant Population of the United States* by Barry Edmonston and Jeffrey S. Passel, Urban Institute Program for Research on Immigration Policy Paper (PRIP-UI-19), 1992.

Continued immigration will support ongoing increases in the number of first-generation Hispanics, with births increasing the number of second- and third-generation members during the next 50 years. The numbers of first-generation Hispanic immigrants will more than double between 1990 and 2040, going from 9.1 million to 20.9 million. During the same period, the number of members of the second generation will more than triple—from 6.1 million to 21.3 million.

Like past groups of immigrants, the descendants of today's new immigrants will adjust to U.S. society as generations succeed the original foreign-born. Nonetheless, the size and recency of the large movements from Asia and Latin America suggest that distinctive racial/ethnic communities will exist for many years—and enter into the calculus of educators, marketers, and policymakers of the 21st century. ■

Barry Edmonston is a study director with the Committee on National Statistics at the National Research Council and Jeffrey S. Passel is a program director at The Urban Institute.

1. For more details on methodology, see Barry Edmonston and Jeffrey S. Passel, "Immigration and Immigrant Generations in Population Projections," *International Journal of Forecasting*, forthcoming.
2. The projections make no adjustments for intermarriage or changes in racial/ethnic identifications.

NEWS CLIPS

Once-a-week Pill

In May, India introduced the first once-a-week oral contraceptive to be approved by a government. Centchroman, commercially known as Saheli, was released after 20 years of research within India. Experts outside of India, however, remain skeptical. India's research has been heavily veiled in secrecy and similar efforts in the U.S. and Europe have been abandoned after discouraging results. The World Health Organization also ceased research in 1978. In fact, Indian clinical trials showed Saheli to have a failure rate of 12 percent.

Critics say that a once-a-week pill is more likely to be missed than one that is taken every day. Additionally, in the U.S., some object that the drug acts to abort an early product of conception, rather than by preventing fertilization. If this is found to be the case, a U.S. ban on abortifacient research would prohibit U.S. experts from testing Saheli. [*Family Planning World*, July/ August, 1992]

Fewer in Farm Families

The number of farmers in the United States is half what it was 20 years ago, according to a report issued by the Census Bureau and the Department of Agriculture. In 1990, 4.5 million people lived on farms, down from a high point of 32 million in 1910. Nonetheless, the proportion of land dedicated to farming was approximately the same in 1990 as in 1920. Today, only one third of persons employed in farming live on farms. Technological advancements have dramatically changed the nature of the farming industry–encouraging the consolidation of farms into larger tracts and heightening competition faced by small independent farmers.

Those who remain on farms are increasingly taking jobs elsewhere. Off-farm employment has particularly increased for female farm residents. This trend has helped to increase the median income of farm households 19 percent between 1987 and 1989, to $28,824. [*Washington Post*, 10 June 1992]

Married State Grows Rarer

Only 61 percent of American adults (people ages 18 and over) were married in 1991, down from 72 percent in 1970, according to the Census Bureau. Black Americans are even less likely to be married. Less than half (44 percent) of African-American adults are currently married, compared with almost two-thirds (64 percent) in 1970.

The number of never-married American adults nearly doubled between 1970 and 1991, rising from 21 million to 41 million people. Those who are marrying are doing so at later ages: the median age at first marriage for women rose from 20.8 in 1970 to 24.1 in 1991; for men it was 26.3 in 1991 from 23.2 in 1970. [U.S. Census Bureau, "Marital Status and Living Arrangements," *Current Population Surveys* P-20, no, 461, July, 1992]

Zambia Demographic and Health Survey

Recently-released data from the 1992 Zambia Demographic and Health Survey report a total fertility rate of 6.5 births per woman, and a contraceptive prevalence rate among currently married women of 15 percent for all methods (9 percent for modern methods). Half of those who use a modern method use the pill; female sterilization and the condom each account for about another one-fourth of users. About one-fifth (22 percent) of all women want no more children, and another 40 percent would like to wait at least two years to have another child. Although 99 percent of women interviewed had heard of AIDS, and 88 percent were aware that AIDS could be contracted through sexual intercourse, there was less awareness of other modes of transmission or ways of preventing the spread of the disease.

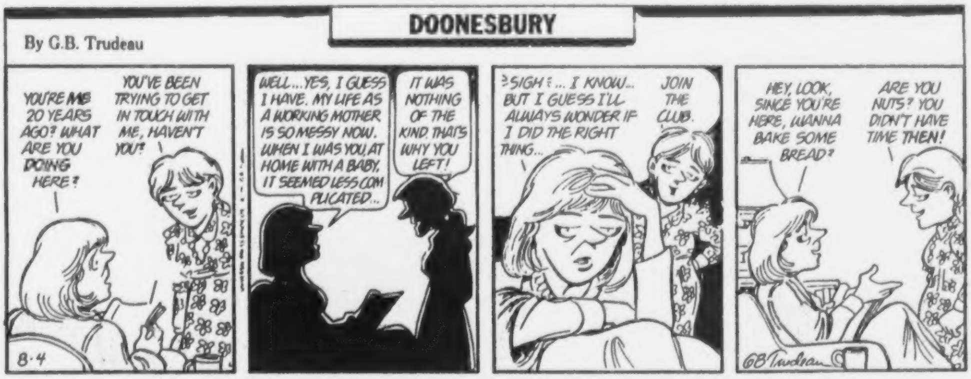
Ninety-two percent of women said that sticking to one partner would prevent AIDS; only 8 percent mentioned the use of condoms.

How Big Is the Boomer Vote?

In this election year, two out of every five potential voters will be baby boomers (41 percent). This group, ages 28 to 46, will number 77 million in November of 1992. Yet, the political influence of their large numbers will be counteracted to some degree by their relatively low turnout patterns. In 1988's presidential election, baby boomers made up 39 percent of all voters, and 42 percent of the voting age population. However, only about half (52 percent) of all boomers reported voting, compared to a 61 percent voter turnout for nonboomers. [U.S. Census Bureau, news release, 3 August 1992]

Language a barrier for half in Miami

1990 Census data reveal that English is the second language for 73 percent of Miami's residents; and 50 percent of the population say they don't speak English well. In the city with a population of 358,500 in 1990, nearly 60 percent were not born in the United States—and of these almost half immigrated to the U.S. in the last ten years. Ten years ago, only 30 percent of residents classified themselves as not speaking English well. New immigrants arrive in Miami faster than the speed with which new residents learn English, meaning that the language gap will not be bridged in the near future. [*USA Today*, 3 April 1992]


DOONESBURY
By G.B. Trudeau
YOU'RE ME 20 YEARS AGO? WHAT ARE YOU DOING HERE?
YOU'VE BEEN TRYING TO GET IN TOUCH WITH ME, HAVEN'T YOU?
WELL... YES, I GUESS I HAVE. MY LIFE AS A WORKING MOTHER IS SO MESSY NOW. WHEN I WAS YOU, AT HOME WITH A BABY, IT SEEMED LESS COMPLICATED...
IT WAS NOTHING OF THE KIND. THAT'S WHY YOU LEFT!
SIGH... I KNOW... BUT I GUESS I'LL ALWAYS WONDER IF I DID THE RIGHT THING...
JOIN THE CLUB.
HEY, LOOK, SINCE YOU'RE HERE, WANNA BAKE SOME BREAD?
ARE YOU NUTS? YOU DIDN'T HAVE TIME THEN!
8·4
GB Trudeau

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Geographer's Meet

Commemorating the 500th anniversary of Columbus' voyage, "Geography is Discovery" was the theme of the 27th International Geography Congress in Washington, D.C., in August. Over 3,000 attended from 79 countries. Following closely on the heels of the "Earth Summit" in Rio, environmental issues were high on the program's agenda. B.L. Turner of Clark University and Gilbert White of the University of Colorado highlighted the contribution of geographers in examining global change, providing both detailed knowledge of specific locales or regions, and a "holistic approach to environmental research."

Fellowship opportunities

Two-year fellowships in population and family planning organizations in developing countries or in international agencies involved in population and family planning are available for recent graduates and population professionals. Candidates must have a master's degree in population or a related field and be U.S. citizens or permanent residents. Individuals with training and/or experience in the following areas are encouraged to apply: operations research, demographic research, management information systems, family planning management and evaluation, and population information, education, and communication. For information, write: Population Fellow Program, University of Michigan, School of Public Health, 109 S. Observatory, Ann Arbor, MI 48109-2029. ■

POPULATION UPDATE

Estimated United States Population:

As of June 1, 1992	255,174,000
As of June 1, 1991	252,442,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports* P-25, no. 1089.

Estimated World Population:

As of October 1992	5,443,000,000
Annual growth	91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*

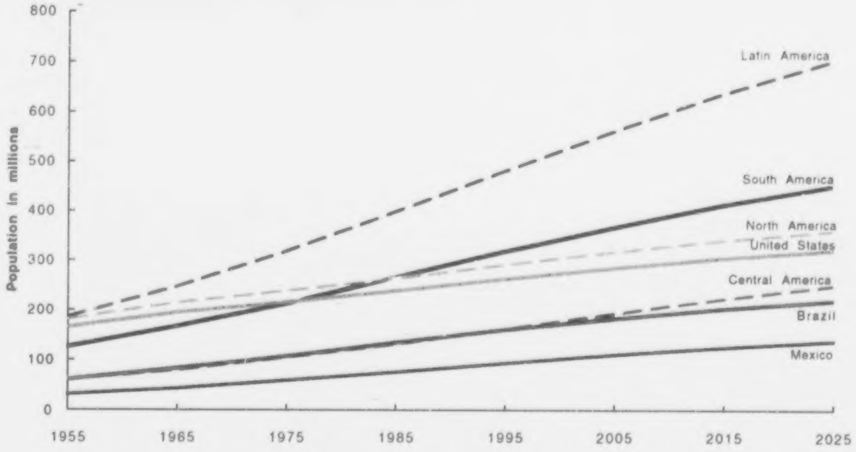
Latest Provisional Statistics for the U.S.: March 1992

	12 months ending with March				
	Number		Rate		
	1992	1991	1992	1991	1990
Live births	4,127,000	4,173,000	16.2	16.6	16.4
Fertility rate	—	—	70.0	70.9	69.6
Deaths	2,185,000	2,139,000	8.6	8.5	8.7
Infant deaths	36,200	37,800	8.8	9.1	9.6
Natural increase	1,942,000	2,034,000	7.6	8.1	7.7
Marriages	2,382,000	2,433,000	9.4	9.7	9.7
Divorces	1,200,000	1,168,000	4.7	4.6	4.7

Note: Fertility rate is given per 1,000 women ages 15-44; infant deaths per 1,000 live births; other rates per 1,000 population.
Source: National Center for Health Statistics, *Monthly Vital Statistics Report* vol. 41, no. 3 (1992)

SPEAKING GRAPHICALLY

Population Projections for the Americas



Note: Central America includes Mexico and the Caribbean. Latin America includes South America, Central America, and the Caribbean. North America includes Canada and the United States.
Source: UN Population Division, *World Population Prospects: The 1992 Revision.*

When Columbus landed 500 years ago, an estimated 14 to 100 million people lived in the Americas. Today, almost 806 million do, and the total is expected to reach 1 billion by 2025.

TAKE A NUMBER

Although the future of "Soviet" statistics is very much in doubt, we did come across the first publication from the new Commonwealth of Independent States (CIS). The Russian name of this new grouping of former Soviet republics is a real tongue-twister: *Sodrushestva Nezavisimych Gosudarstv*. The CIS now consists of eleven former republics—the original 15 less Estonia, Latvia, Lithuania, and Georgia.

Demographers are wondering if this new entity will publish detailed statistical data for its member republics as the old USSR once did. While the future direction of former Soviet statistics may be difficult to predict, birth and death rates for 1991 have now been made available. This is the first time we've seen CIS data.

Note that the birth rate in some Muslim republics rose in 1991, a change thought to result from increasing influence of Islamic fundamentalism in those countries. Elsewhere birth rates tended to drop, possibly due to economic uncertainty. The drop in the birth rate was particularly dramatic in Russia. In Ukraine, the crude birth rate is now lower than the crude death rate, creating natural decrease.

	Births per 1,000 population		**Births per 1,000 population**	
	1990	**1991**	**1990**	**1991**
Armenia	24.0	23.1	6.6	6.8
Azerbaijan	26.4	27.1	6.2	6.3
Belarus	13.9	13.0	10.7	11.2
Kazakhstan	21.7	21.0	7.7	7.9
Kirgizia	29.3	29.2	7.0	6.9
Moldova	17.7	16.7	9.7	10.5
Russia	13.4	12.2	11.2	11.3
Tadjikistan	38.8	39.7	6.2	6.0
Turkmenistan	34.2	34.1	7.0	7.3
Ukraine	12.7	12.2	12.1	12.8
Uzbekistan	33.7	34.6	6.1	6.2

Source: State Statistical Bureau, CIS, 1992

PRB Awards Dinner

Friends of PRB are cordially invited to attend our Annual Awards Dinner on October 29, 1992, at the Embassy Suites Hotel, 1250 22nd Street, N.W., Washington, D.C. The pre-dinner reception begins at 6:30, dinner at 7:30.

Highlighting this year's environmental theme, Georgetown University demographer Murray Feshbach will speak about his recent work on "ecocide" in the former Soviet Union. For more information contact Colette Thomas at PRB, (202) 483-1100.

PRB Visiting Scholar Post

Applications are invited for the PRB Visiting Scholar Award for the nine-month period beginning September 1993. The award, made available under a grant from the Andrew W. Mellon Foundation, supports a scholar in residence at PRB's Washington, D.C., offices, engaged in a population policy-oriented research project of either international or domestic focus. The application deadline is January 15, 1993. Contact: Visiting Scholar Program, Population Reference Bureau, 1875 Connecticut Avenue, N.W., Suite 520, Washington, DC 20009-5728.

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Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

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Recycled Paper

SPOTLIGHT

Chile

Population: 13.6 million
Land area: 292,260 square miles
Births: 23 per 1,000 population
Deaths: 6 per 1,000 population
Infant deaths: 17 per 1,000 live births
Natural increase: 1.8 percent per year
Total fertility: 2.7 births per woman
Life expectancy: 71(male) / 76(female)
Capital city: Santiago

By Sharon Hershey

Chile's unique elongated shape—almost 24 time longer than it is wide—is formed by the natural borders of the Andes mountain range to the east and Pacific Ocean to the west. With an area nearly twice the size of Montana, Chile consists of three distinct geographic regions: the Atacama Desert in the north, a temperate central region where most of the population resides, and a cool and moist agricultural region in the south. The people of Chile are nearly all mestizos, of mixed European and indigenous backgrounds.

Most of Chile's 13.6 million people (85 percent) live in urban areas, predominantly in the capital city of Santiago. Pollution is a major concern for these city dwellers. Santiago is considered the second most polluted city in Latin America, after Mexico City. Backed against the Andes Mountain chain, prevailing winds trap industrial pollution and the exhaust of thousands of private buses—the result of an unregulated mass transit system. In the winter months of June through September, pollution alerts are common.

Nascent environmental policies are being developed to deal with severe air and water pollution. With no regulation of toxic wastes and lack of sewage treatment plants in Santiago, home and industrial waste are being deposited directly into rivers. The use of this contaminated water for irrigation of crops is common in Chile, increasing the risks of water-borne diseases.

PERU
BOLIVIA
ARICA
ANTOFAGASTA
CHILE
VALPARAISO
SANTIAGO
ARGENTINA
CONCEPCION
CHILE
PUERTO MONTT
PUNTA ARENAS

Chile's fishery production is the fifth largest globally. However, overfishing is threatening the future of this industry. Chile also produces one-fifth of the world's copper and most of the grapes that are imported to the United States.

Eight years of growth, healthy budget and trade surpluses, low inflation, and a booming stock market have made Chile an economic model for other Latin American countries. Chile followed a free-market approach, privatizing industries and developing new exports under the Pinochet dictatorship from 1973 to 1990. Yet, along with the economic achievements of the regime, came severe inequality, human rights abuses, and environmental degradation.

Today, between one-half and one-third of Chileans live in poverty; and 12 percent live in what the government calls "extreme poverty," earning less than US$130 per month. Twenty percent of the population hold 80 percent of the wealth in Chile.

In March of 1990, Patricio Aylwin took office as president of Chile, officially ending 17 years of military dictatorship. A major challenge of the democratically elected government—a coalition of 16 political parties—is to maintain economic growth while trying to decrease the disparity between wealthy and poor Chileans. Early actions by the Aylwin government included a tax increase for businesses and a 30 percent increase in social spending. Programs focus on job training and services for youths, the nearly 20 percent of Chilean households headed by women, and affordable housing. While continuing to adhere to the free-market economic principles put in place by Pinochet, and currently espoused throughout much of Latin America, Chile's new government is striving for greater equity.

Chile's TFR (total fertility rate, or average lifetime births per woman) of 2.7 is one of the lowest in South America. On indicators of health, Chile compares more closely to Europe than its Latin neighbors. Life expectancy in Chile is the highest in South America and nearly matches the European average of 71 years for men and 78 for women. The infant mortality rate in Chile is also much lower than in surrounding countries: the South American region averages 56 infant deaths per 1,000 births, compared to Chile's 17. On overall population growth, however, Chile is clearly in line with its Latin neighbors. An annual natural increase of 1.8 percent in Chile compares to 1.9 in South America and .2 percent in Europe. ■

RESOURCES

Canada's Population

In this overview of historical and contemporary demographic processes in Canada, author Roderic Beaujot explores Canadian population growth, household and family arrangements, language and ethnic composition, educational levels, labor-force participation, and income distribution. Beaujot also examines some of the more controversial issues in Canada today, including immigration, ethnic and gender conflicts, urbanization, societal aging and the rising costs of health care.

• *Population Change in Canada: The Challenges of Policy Adaptation*, by Roderic Beaujot. Toronto: McClelland & Stewart, Inc., 1992. 376 pages. $22.95 paperback. ISBN 0-7710-1158-X.

New data on former USSR

Detailed demographic data are now available for the republics of the former Soviet Union. A new resource provides information on population, education, housing, nationalities, family size, employment, and vital statistics at republic, regional, and oblast levels. (An oblast is a substate political boundary; there are 169 oblasts in the former USSR.) The book is accompanied by a 24" x 36", black-and-white administrative map of the former Soviet Union.

• *The First Book of Demographics for the Republics of the Soviet Union, 1951-1990.* Shady Side, MD: New World Demographics, 1992. 156 pages. $199.00 paperback. ISBN 0-9632883-0-X.

Historical demography

In the latest edition to the series, Cambridge Studies in Population, Economy and Society in Past Time, Richard Vann and David Eversley examine demographic change in the Quaker populations of Britain and Ireland between 1650 and 1900. One of the exceptional aspects of the study, titled *Friends in Life and Death,* is the excellent store of written materials available from the period, including detailed fertility, mortality, and nuptiality records. Data for Quakers in Britain and Ireland are compared to France, Quebec, and the American colonies.

Other recently released titles in the series include: *Istanbul Households; Marriage, Family and Fertility 1880-1940,* by Alan Duben and Cem Behar, and *Population and Nutrition: An Essay on European Demographic History,* by Massimo Livi-Bacci.

• *Friends in Life and Death: The British and Irish Quakers in the Demographic Transition, 1659-1900,* by Richard T. Vann and David Eversley. Cambridge: Cambridge University Press, 1992. 281 pages. $49.50 hardbound. ISBN 0-521-39201-2.

Changes in Africa

Age at first marriage is rising in some African countries, while not in others. A World Bank report examines data from national sample surveys, such as the World Fertility Survey and Demographic and Health Surveys for 19 African countries. Some countries show a clear trend of increases in age at first marriage and age at first birth (all located in northern Africa). Another group shows a weaker indication that recent changes are underway (Kenya, Mauritania, Nigeria, Senegal, Togo, Uganda, and Zimbabwe). A third group shows little or no evidence of any change. The study also provides data on trends in women's education, generally inversely related to age at first marriage.

• *Age at First Marriage, Age at First Birth, and Fertility in Africa,* by Charles F. Westoff. Washington, DC: World Bank Technical Paper, No. 169. 58 pages. $6.95 paperback. ISBN 0-8213-2102-1.

New housing data

A new report released by the Census Bureau provides comprehensive U.S. housing data. Among the findings... Baby boomers are moving West and South...two-thirds of the 1.7 million first-time homeowners between 1989 and 1990 were married couples...sales prices for new homes decreased by 5 percent between 1979 and 1989. The report provides data on housing type and cost, householder race, sex, income, and marital status, as well as mobility and regional trends.

• *Housing in America: 1989/1990,* by John F. Devaney. Washington, DC: U.S. Census Bureau, 1992. 61 pages. $4.50 paperback. GPO stock no. 003-024-08102-4.

Costs of teenage pregnancy

In 1989, 517,989 babies were born to teenagers—nearly one each minute—representing an 8 percent increase from the previous year. And adolescent pregnancy rates in the United States are the highest among developed countries, according to this study from the Center for Population Options. Each child born to a teenage mother in 1990 will cost taxpayers an estimated $18,133 by the time the child reaches age 20, according to the report. Teen mothers are less likely to graduate from high school and more likely to live in poverty than older mothers. This sixth edition of the annual report analyses the economic and social costs of teenage pregnancy nationally and for seven states and two cities.

• *Teenage Pregnancy and Too-Early Childbearing: Public Costs, Personal Consequences,* Center for Population Options. Washington, DC: Center for Population Options, 6th edition, 1992. 45 pages. $8.00.

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